Exploring greater partnership between Clinical Trial Networks, Clinical Quality Registries and Trial Coordinating Centres with Industry

Report of the IIT-Industry Roundtable held April 29, 2022

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Contents

1 Acknowledgements

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Document History

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2 Background

Recognising the need to work more closely with industry, the Medical Research Future Fund (MRFF) 2020 Enhancing Clinical Trials Network Capabilities Grant awarded to the Australian Clinical Trials Alliance (ACTA) includes an activity under workstream 5 entitled 'Facilitating Industry Funded/Sponsored Trials'. The workstream's objective is to facilitate opportunities for greater collaboration between ACTA members that include Clinical Trial Networks, Clinical Quality Registries, and Trial Coordinating Centres (Academic) with the commercial (Industry) sector. There are two sub-components to workstream 5, namely:

> 5.1-Promote partnership between CTNs, CQRs and CCs with Industry
>
> 5.2-Leverage expertise with CTNs and CCs by partnering with Industry to assist with one or more of trial design, site-identification, and trial conduct for industry trials

The aim of the roundtable held on the 29th of April 2022, was to bring key stakeholders across the spectrum of clinical trial activity to explore and articulate ways in which the academic and industry-led sectors can work more closely together. Specifically, the roundtable focused on describing and discussing:

- Challenges and enablers for investigator-led and industry partnerships
- Potential partnership activities of mutual interest
- Joint education and development opportunities for the clinical trial workforce.

Whilst reforming and streamlining research governance is vital to enhance clinical trial activity, it was outside the scope of this project except for where enhanced collaboration between the sectors can provide solutions themselves and not require specific reform of site processes.

The primary outcome of the roundtable was to establish a shared understanding of what stakeholders want from greater collaboration between the sectors and what the key factors are to making this happen. The roundtable, together with the environmental scan are intended to support ACTA to develop a future work plan aimed at making greater collaboration a reality.

The Roundtable, sponsored by Medicines Australia, brought together over 50 key stakeholders representing the Australian Clinical Trials Alliance (ACTA) community, the commercial clinical trial sector, government, and consumers. The format of the roundtable was an opening session with presentations from ACTA members with experience in industry collaborations, from the Medicines Australia Research and Development Taskforce (RDTF), and from the Chair of ACTA. The facilitator presented the results of the pre-roundtable survey and opened discussion to enable selection of topics for the two breakout table discussion sessions.

3 Summary of the pre-roundtable survey

All roundtable invitees (Appendix A) were asked to complete a short pre-meeting survey (Appendix B) regarding the key benefits, barriers and enablers of collaboration between industry and investigator-led clinical trials. The purpose of the survey was to identify some key themes related to the purpose of the roundtable in advance. The information from this survey was used to focus discussion at the roundtable around topics identified by the participants rather than taking time on the day to do this. The survey was opened on the 1 April 2022 for a period of 2 weeks. A total of 52 people were invited to participate, and 35 responses were received by the 14 April 2022. We were mindful that respondents may be identifiable based on the small sample size, and therefore, taken care to aggregate into key themes and only provide the general wording where it was not identifiable

or where individuals had given their consent to publish their comments. The pre-roundtable reading is provided in Appendix C and individual comments to each question presented in Appendices D- I) of this report. The pre-roundtable reading provided a high-level thematic analysis of the responses

to each survey question, which was used to guide discussion at the roundtable meeting and to provide some useful insights that have been used in the general discussion.

4 Summary of roundtable presentations

There were five presentations given by four Clinical Trial Networks (CTNs), who were members of ACTA and one from the chair of the RDTF.

The first presentation about the ANZ Urogenital and Prostate Trials Group (ANZUP) was given by Prof Martin Stockler, a medical oncologist from the University of Sydney, and the Director of Cancer Trials at the National Health and Medical Research Council Clinical Trial Centre (NHMRC CTC). ANZUP, formed in 2008, is a very successful cooperative trials group that conducts trials often involving a multidisciplinary approach using interventions from medical oncology, radiotherapy, nuclear medicine, and surgery. It has over 2000 members with over half being clinicians. Having been awarded several ACTA clinical trial awards and publishing the outcomes of their trials in the New England Journal of Medicine (NEJM), ANZUP has a demonstrated track record of successfully developing and conducting clinical trials. Prof Stockler outlined how two trials, ENZAMET and ENZARED that both use the androgen blocker Enzalutamide (XTANDI), had been co-developed with Astellas who have the license to market it in Australia. These international trials run out of Australia (ENZAMET had 80 sites including international) had benefited from the working relationship they had through Astellas and its global partners (Pfizer). Astellas had provided funding for the trial, without which, it would not have been possible. The results were very positive and demonstrated very significant improvements in outcomes. ANZUP works with many industry partners and sees this as important to its mission.

Prof Carmel Hawley, a nephrologist and Director of Haemodialysis at Princess Alexandra Hospital Brisbane outlined how the Australasian Kidney Trials Network (AKTN) formed in 2004, is a collaborative group for investigator-led kidney trials in Australia and was created under the ANZ Society of Nephrology. The AKTN takes concepts from any of the membership in Australasia across all disciplines spanning, medicine, nursing, and allied health. Like other collaborative groups there is a formal process for developing concepts through to development and execution. AKTN is a full process collaborative group and runs the trials from concept to implementation. The CKD-FIX and PEXIVAS trials are examples of successful studies that have both been published in the NEJM. Eight trials are in the pipeline and five are ready to commence leading to an expansion in staffing, partly funded by NHMRC grant funding. AKTN has approached industry for unrestricted funding to support their studies or for free access to products and have had very strong support.

In addition, they have been approached to identify potential Principal Investigators or sites for industry-sponsored niche trials, particularly through Contract Research Organisations (CROs). However, she also noted that some sites and investigators didn't want AKTN to 'interfere' with their own relationships with industry in terms of site selection. Prof Hawley suggested that for Australia, most of the trials have already been developed before they come. One issue that had arisen is giving data to the industry supporter, which had previously not come up. Prof Hawley noted that novel trial designs, like adaptive trials, were becoming common and that there were more potential products available now than ever. This meant there was some competition for the same patient population. Most of these were from industry/CRO run trials but it meant that not only did they compete but also competed with AKTN. Finally, where numerous products are being trialed in the same population, care must be taken about comparing them with each other within platform adaptive trials, and Prof Hawley indicated that discussion of this would be useful at the roundtable.

Prof Robyn Clark, the Research Development Lead (SA) provided an overview of the Australian and New Zealand Alliance for Cardiovascular Trials (ANZACT), which has been established to provide a framework to support the development and conduct of investigator-initiated, multi-centre clinical trials and associated research activities across the spectrum of clinical craft groups in cardiology. The clinical areas are cardiology and stroke. Whilst these are very important to health, Prof Clark identified that the current success rates for academic groups was very low in gaining public funds

for clinical trials, and that new ways to try to solve access to funding was important. One area that was holding the sector back was a lack of funding for infrastructure and for people to run the trials themselves, in particular, core operational infrastructure. Unlike the Cancer Australia funding for oncology groups, they did not have such central benefits. A major recent advance that had been made came from employing a person with an industry (mining) background who brought a very necessary business perspective to operations. Also, ANZACT had benefited from a PhD student who came from a project management background who applied industry-style approaches that had raised productivity. Overall, Prof Clark saw great opportunities to learn from Industry in operations and training that would benefit the Investigator-initiated Trial (IIT) sector. Additional benefits would be working together with consumer groups to facilitate recruitment.

Prof Lorraine Chantrill, the current Chair of the Australasian Gastro-Intestinal Trials Group (AGITG) and a medical oncologist working at the Illawarra Shoalhaven Local Health District, outlined how AGITG had worked extensively with industry for the last 30 years and has a long history of world leading success in leading international studies. In the past, industry came to AGITG to get them to conduct trials with their agents and the use of Imatinib (Gleevec) in Gastro-Intestinal Stromal Tumour (GIST) is a good example of how they led this work. However, this is no longer the case, and researchers are now coming to AGITG hoping to be able to find a way to get industry to support a trial by allowing access to their products, and gaining access is becoming more difficult. AGITG raises funds to help conduct studies, and whilst they currently raise about $1 million a year, it only seed funds studies but they want to get to $5 million to be able to conduct studies independently. Dr Chantrill pointed to the CO17 trial that used Erbitux (Cetuximab) in advanced colorectal cancer. The CO17 trial was the international lead demonstrating how molecular mutations such as k-ras needed to be used as companion diagnostics to tailor treatments to patients, paving the way for molecular targeted trials. Trials like INTEGRATE used treatments from several companies and were important practice changing studies.

AGITG had brought Key Opinion Leaders (KOLs) together to come up with ideas to develop new concepts and these had been very productive. Industry was invited to these meetings to ensure their involvement from the outset as the AGITG will need access to their product pipeline. The challenges they had found were the very slow processes to move through when working with industry, which required a country-based application followed by a global process. This process takes many months, and if it is not successful, they must then go to the next company in sequence, creating significant delays. Parallel application is not currently possible or appropriate. Now the AGITG wishes to also do basket trials, it will be more complicated to line up several companies to work to a common protocol. An alternative is to buy the drugs at cost price, but this has not received any traction. Drug costs are not the biggest cost (except for immunotherapies), however, inability to obtain the drug can lead to failure of a funded trial even when that funding came from the highly competitive public grant scheme.

David Wilks, the Head of Clinical Services at Bristol Myers Squibb provided an overview of the industry perspectives in his role as the co-chair of the Medicines Australia / MTAA / Ausbiotech R&D Taskforce (RDTF). The purpose of the RDTF is to be the pre-eminent voice for industry to ensure

Australia maintains an international leadership role in clinical trials. The industry sector wants to understand the perspectives of the ACTA community and to find ways to work more closely. The common goal is to strengthen the clinical trial ecosystem for all that ultimately improves the lives of the community. The key objective is to gain a shared understanding of what stakeholders want from greater collaboration and what are the key ingredients to making this happen. A greater awareness of the global competitive environment and the trends that affect bringing trials to Australia also requires consideration. Enhancing participation is a key objective as well as opportunities for new ventures.

Following the presentations by stakeholders, a summary of the pre-roundtable workshop was provided by the facilitator. Stakeholders were invited to engage and provide their feedback as to whether these accurately reflected their thoughts and to identify any missing topics. The discussion allowed refinement of the table topics for the breakout session.

5 Summary of session 1 breakout table group discussions

5.1 Co-designing clinical trials-Options for greater collaboration

Many industry sponsored clinical trials in Australia are conducted at a global level. The opportunity to participate in the conception of the trial or influence its design is limited unless a network investigator is invited to be part of the Trial Management Committee (TMC), or has applied to the sponsor for funding for a trial. In contrast, Investigator-led trials led by Australian investigators are designed locally. An opportunity exists for Australia to play a greater role in the design of global trials through closer engagement of the two sectors. Industry trials involve Australians as Chief Investigators (CIs) and members of Trial Management Committees, although this could be increased. Additionally, in Australia, the emerging MedTech and BioTech sector are conducting smaller scale trials, and this creates a further opportunity for greater involvement between the two sectors for homegrown studies.

An important question with respect to co-design is managing competing interests. For instance, are academic CIs available to also work on industry-sponsored studies or would these compete with their existing activity? Clinicians also need training in the specifics of industry trials that involve complying with the requirements of regulatory agencies, which add complexity. It is important to understand that there is a spectrum of 'collaboration' that ranges from whether the trial is investigator driven and requiring industry resource support through collaboration as equal partners and all the way to an industry sponsored study that involves the academic sector primarily to recruit patients.

Most pharmaceutical companies have programs that enable investigators to apply for support for their own trial concepts. However, there is no information available publicly about past instances and experiences and only word of mouth anecdotes from those who have experience. One option that could be developed from the ACTA IIT-Industry partnership initiative is to obtain examples and to work these into a 'how to' guide with cases that illustrates not only the benefits of co-design but would provide practical guidance in adopting models that have worked well and to identify potential pitfalls to avoid. Linked to this is a need to have leaders showcase the merits of such collaborations if they are to persuade their colleagues to engage.

From an industry perspective, there is an opportunity to work more closely with academia on emerging methodologies such as adaptive design trials, especially where the networks have had prior experience and success in delivering these. Examples such as the I-SPY 2 Trial initiative illustrates how such master protocols can work in specific disease types to build a resource that is useful for the entire sector. It was suggested that this could in the first instance be focused on rare diseases. It is important to define the specific benefit to industry though as ultimately the decision to partner is a commercial one. Some of the potential benefits could include:

- An opportunity to leverage access to the resources of the trial network to reduce costs or to expedite trial roll out
- Reduce the cost to run the equivalent industry trial through the network
- Access to key resources such as a unified consumer engagement framework.

The collaborative model needs to meet the requirements of regulators and it will be important to engage them too to ensure that the novel approaches meet their requirements and don't delay or hold up implementation of findings. Some innovative ideas were presented that included having the regulators incentivise industry by extending patents if they conduct trials this way but the current process was deemed not designed to promote this.

An additional benefit of creating a more collaborative model would be to use the greater combined resources to help build site capability, particularly by having experienced sites help the less experienced. Additional areas to focus on would be to find a joint approach to addressing issues about ensuring greater diversity in participation and especially in harder to reach groups. Sharing work on approaches that employ technology (noting that this is another ACTA project) to identify and recruit patients as well as different models of consent were suggested.

As identified by David Wilks in the opening session, building greater collaboration requires a mutual understanding of one another including the competitive nature of the environment for industry. This might require each side to make changes to their current practices, such as the tight timelines and inflexibility that industry applies to trial development processes. It was suggested that ACTA should look to other jurisdictions where this had worked well such as South Korea and the UK (see Environmental scan).

5.2 How to manage protocols involving multiple drugs

This topic raised concerns during the morning presentations around how to manage access to drugs in clinical trials that are testing two or more of these in one protocol, and when they are manufactured or distributed by competitor companies. This is important in basket trials and adaptive design trials that use a master protocol, which many drugs may be switched in and out over time. The issues also relate to how companies with directly competing products for the same indication can design trials that aren't competing for the same pool of patients. The discussants identified that since the unifying theme is to make access to trials more available to improve patient outcomes clear and fair mechanisms to address these issues had to be found. However, where a product has been approved for use but there remains an absence of evidence that it will indeed be better than other types of treatment it has not been tested against, or used in combination with, it may be argued that it is unethical not to make that experimental agent available through a trial. However, there is no obligation on a company to make its product available in a clinical trial once it is approved for use. The breakout table group also explored what levers could encourage companies to provide their products in such trials. One possibility identified by Dr Chantrill was to simply bypass the issue by buying the product. In Australia, it may be argued that the Pharmaceutical Benefits Scheme (PBS) (government funder) has a direct interest in supporting such trials to ensure that there is ongoing evaluation of the cost-effectiveness of any treatment. These discussions led to some consideration of Real-World Data/Evidence (RWD/RWE) that was discussed more in session 2. There is an opportunity through the current project to explore this issue more and to identify some tangible and practical approaches to resolving it.

5.3 Improving consumer engagement

The discussants raised the need to be clearer about what 'consumer' means and suggested that perhaps it is time to move to broaden it to 'end-user', understanding that this can mean several stakeholder types. That is, whilst it has been traditional to equate consumers with patients, a broader definition is required as it could also include health services, governments, and practitioners. Engagement needs to be meaningful, yet there is a view that in many cases it is still too tokenistic. There was acknowledgement of ACTA's leadership with CT:IQ in developing a consumer toolkit and that it could play a significant role in establishing better mechanisms to include genuine community engagement for both the academic and industry clinical trial sectors. Similarly, several clinical trial networks already have well established and functional consumer engagement practices and these could be used to inform best practice for emerging networks and for industry.

Consumer engagement was identified as a long-term commitment with significant resource implications if it is to be done properly and so attention to resourcing is needed. There is insufficient funding for consumer engagement broadly and this contributes to doing it less effectively. Representation of consumers in clinical trial activities needs to be made more visible, which will encourage other consumers to participate and assist clinical trialists to find ways to engage.

5.4 Improving access to investigational products

A sine qua non of all clinical trials is access to interventions and in most instances, this means access to therapeutic products and placebo where relevant. Like the discussions about access to multiple interventions/drugs, the discussants saw this as a problem for the whole sector and that any solution required cultural as well as logistical approaches. The discussants linked this topic to the need to establish clinical trials as 'standard of care' in the context of health service delivery that would place developing and conducting trials as a priority. They also suggested that this topic lent itself to post-approval/market access and evaluation, particularly in the context of making therapeutic products available after the trial has stopped recruiting, or whilst it is undergoing evaluation for registration or reimbursement.

The tables also discussed what was the optimal way to ensure trials were seen to be done independently where there was sponsorship that could raise potential conflicts of interest. This topic appeared in the literature as part of the Environmental Scan and there are a variety of proposed models that can manage this effectively. This links to the discussions on Real World Data/Evidence and looking at other approaches to obtaining high quality unbiased data, such as using registries and other quality activities. It was proposed that a new body, the Australian Consumer Clinical Priority Evaluation Scheme (ACCESS) could be established and would comprise a collaboration of industry, academia, consumers, funders, and health services. Its primary function would be to facilitate processes leading to greater access to investigational products across a spectrum of activity, although the details of how and what would need to be developed.

5.5 Influencing policy

An area of interest to both sectors is how to influence the environment for clinical trials in Australia, and specifically how this may be achieved through influencing policy. This can operate at several levels and the discussants raised the need to take a view that explored all possible areas. This means that work to influence policy would include topics such as how to influence health services, government, and other funders of health care to view clinical trials as a priority and ideally as an integral part of healthcare. It was even suggested that clinical trials should have a Medicare item number to encourage participation through direct financial reward.

Current barriers included a lack of clear policy around how the standard of care component of clinical trials should be managed with evidence that health services believed that the clinical trial should fund this, which is antithetical to trialists who simply cannot afford to do this. Moreover, this would be 'double dipping' by health services and clinical trials should not be viewed as being there to cross subsidise healthcare. The notion that clinical trials could offset routine health care costs has been promulgated by some but creates unrealistic and unfair expectations and places them contextually in the wrong place.

Another area of concern raised was how to ensure trials were being operated at as many sites as possible. It was noted that the current system favours sites with a proven track record and the funding model effectively inhibits less well-established sites from ever achieving a level that would make them competitive. Moreover, where site selection is competitive this pitches sites against each other rather than seeing the environment as one to collectively build together. The current Clinical Trial Project Reference Group (CTPRG) criteria that have been framed as site KPIs are limited to site start up times (ethics and governance) and recruitment to target, but they do not reflect site capability nor is there funding to support sites to undertake important infrastructural investment to deliver on them. One major barrier related to site capabilities is good data availability to really understand patient mix to inform both feasibility and recruitment. Changes to data protection policy is required to solve this as the current system overplays the risk of data security that does not align with patient expectations or government objectives aimed at facilitating trial participation.

Overall, better communication is seen as a central enabler across all parts of the sector and between health services and jurisdictions. Clinical Trial Networks and industry operate in silos and seldom share resources or work together or with sites to identify resources to achieve recruitment success. Together, with the lack of good site intelligence, the lack of communication will remain a barrier until there is a committed move toward greater cooperation and collaboration. ACTA could play an important role in undertaking a mapping exercise of key stakeholders and establishing a work program to look at where to initiate policy change.

5.6 Post registration research

Once a clinical trial is completed and the therapeutic intervention approved, and ideally funded, there is a requirement for post-approval/marketing surveillance to collect additional safety and efficacy data. In many funding models, including PBS and the Medicare Benefits Scheme (MBS), this is linked to continued public funding of regulated therapeutic goods. The ACTA member networks often conduct trials that are either directly or indirectly generating data related to post-approval use of therapeutic products. These trials are highly focused on patient outcomes, and they are a form of generating Real World Data/Evidence.

There is also a need to conduct clinical trials related to the toxicities of therapeutics to enhance their utility. For instance, immunotherapies in oncology have dose-limiting toxicity. It is currently very difficult to conduct trials that would find ways to minimise toxicity and therefore enhance utilisation and effectiveness. There is a direct financial incentive to industry to do such studies, but they have not been widely conducted to date.

The discussants identified that it remains unclear who has the responsibility for ensuring these trials are conducted, and ultimately who should fund them. The table raised the question as to whether it is a government responsibility or whether it is a societal obligation of industry, or both? Public funders have an interest in ensuring that they only pay for safe and efficacious treatments and there is a financial incentive to eliminate waste, but to date the funders of care have not been interested in funding such work or are directly prohibited from doing so under their objectives. Industry has an interest in ensuring that its products are safe and efficacious too, and the potential for expanded access should create a clear incentive to fund this work, as well as the positive public image it would create.

There has been a significant push to make sure data generated in research studies is accessible and available for open analysis, with recognition that there are competing issues related to commercial requirements to protect intellectual property in both industry and academic settings. Commercialisation is important for investment in research and development activities and effective ways to manage this whilst promoting open science are needed. To enable this there must be clear enabling policies and a data governance framework that supports data sharing and the removal of the current barriers, which were often seen as bureaucratic and not aligned with the objectives and wants of patients or health services.

6 Summary of Session 2 breakout table group discussions

6.1 Real world data and evidence

Two of the breakout table groups discussed Real World Data and Real World Evidence, spending a lot of time discussing what these are and concluded that it needs a very clear definition. Real World Data (RWD) is the data that can be derived from sources outside of a clinical trial, such as product and disease registries, electronic health records, patient reported outcome measures etc. Real World Evidence (RWE) relates to the benefits and risks of using therapeutic goods derived from the analysis of RWD. Importantly, RWE is classified as not being from classical RCTs. A lot of RWD is being collected but both tables identified that it was very difficult to gain access to it and that its quality and completeness was highly variable. For example, there are already post-registration data collection processes for medical devices, but it is not clear how to get access or to link to this. Given that the data is not regarded as high quality (not from RCT, subject to increased risk of bias), there were concerns expressed about how it may be used to deliver the desired impact. However, the benefits for patient recruitment, hypothesis generation and study design were seen as potentially great.

Collecting data is time consuming and expensive if it is to be done properly and a first step could be to refine the definition of which data should be collected for a national focus based upon what data matters to researchers, consumers, and health services in making decisions. To ensure that the data is useful there is a need for clearly defined national standards. Although, Australia had a reputation for leading Health Data Linkage activities this has fallen away, and the landscape has become increasingly complex and difficult to navigate. There is a need to facilitate data linkage for the purposes of driving the creation of RWE that informs optimal care nationally. The framework should not rely on clinicians to collect data or to do any type of additional data entry.

Some of the issues to resolve will include where the data is to be held, who ‘owns’ it and controls access and how data sharing is managed to ensure maximum use whilst protecting patient privacy. In addition, those creating data that will be used for commercial purposes need protection of their IP and commercial interests. In addition to managing the complexity of patient consent for such activities (noting there is a fear amongst some parts of the community about open access to their data), there is a need to allow organisations to indicate their willingness or capability to share data. A colourful metaphor proposed was the idea of having a ‘signal’ to allow data controllers to indicate when it could be used much the way people who are participating in Halloween put out pumpkins or signs to indicate they are giving out candy.

It was recognised that data systems change over time and the system must be flexible and adaptive to change. Although there is a need for a standardised and simple consent for patients to understand how their data will be used based on clear expectations of usage, it was recognised that the current paper-based systems were not fit for purpose. Instead eConsent and dynamic consent platforms were needed.

6.2 Training and workforce development

Part of the original scope of the project identified finding ways to support workforce development as a priority. The tables that discussed this topic both outlined that it was important to be clear about who would receive training and development. Traditionally, it has only meant study investigators and coordinators but given the fact that clinical trials involve a spectrum of stakeholders to be successful, it was proposed that training should extend to legal, administrative, finance and information technology staff in health services too. Moreover, it is assumed that third party services such as pathology, radiology and pharmacy would manage their own training experience had demonstrated that this was rarely true, and that support needed to be provided.

From a hospital perspective, there was a significant risk to losing high quality study coordinators to industry because of improved pay and conditions. Hospital based staff were often on short-term rolling contracts with little professional developmental opportunities meaning that staff were vulnerable and prone to leave. Such high turnover has been a major concern in the sector and the loss of corporate knowledge and skills reduces Australia's global competitiveness in clinical trials both for industry and academia. To counter this there needs to be stability of employment in an academic/site setting with clear career development opportunities and an appropriate award based on skills and experience. Whilst this was seen as likely to push up operating costs, the benefits in terms of high-quality work leading to better outcomes for clinical trials would offset the expenditure. The table also suggested there needed to be standardised training in the sector, noting that organisations like ARCS provide competency frameworks for clinical trial professionals already but access to this is limited in terms of funding from sites.

The discussants had raised the question of whether it would be possible to create a level playing field between academic and industry roles with similar levels of employment across the two, linked to a standardised 'Clinical Trial Professional' role. One of the problems is there is no single 'academic' workplace standard and the multiple health services and jurisdictions each have different award schemes, and nurses and other health professionals, and non-clinical staff, were all treated differently from each other as well as across sites. The sites themselves struggle to employ staff and must mount business cases demonstrating that the cost of employment is offset by revenue. This is a classic chicken and egg scenario, with no staff being employed until revenue is secured, whilst the revenue can't be secured until the site can demonstrate capability. Equally, it is hard to continue employing a person after a trial completes unless there is a very active unit with a pipeline of trials enabling staff to move on to new studies immediately. As discussed on other tables, this favoured higher volume established sites over developing or smaller sites.

Overall, there was support for a joint approach that would make a Clinical Trial Professional a formal role within a health service in the same way that other routine staff were employed. That no such role exists in standard hospital awards is indicative of a lack of commitment to clinical trials. Part of the failure to achieve this was related to the fact that clinical trials still appear to have not yet achieved a clear value to hospital executives and Boards. Or rather, the support had been largely lip-service and had not translated into clear financial commitment to support roles. The discussants reiterated that other jurisdictions like the UK had been able to establish the value proposition that there is great value in a well-supported clinical trial unit embedded in a health service, and that having trials improves patient outcomes and raises overall quality of care in an organisation. The discussants proposed that one outcome from ACTA could be a joint set of media and information to promote the value of clinical trials.

6.3 Creating a platform to facilitate engagement between the sectors

The discussants identified that the key to this was to define all the areas that there was a shared requirement for and to then explore what a shared approach could look like. The important driver underlying this is a change to the narrative away from competition and toward mutual advantage. Areas that might benefit would be in novel methodological approaches such as platform trials, precision medicine protocols and Real-World Evidence approaches that would provide a pathway to prepare the clinical trial environment for the future. The discussants identified the need to better support post-registration research and development like it has been done in the UK, overlapping with the other table discussions.

6.4 Making the case for value

Whilst stakeholders are clear about the value of clinical trials and the environment has been improving in Australia with visible commitments to enhancing capabilities, there is still a long way to go. One area that remains is making the case to health service funders who still do not see clinical trials as being directly of value to them, or at least don't see any responsibility for funding them. Part of the problem is that defining payers and end-users is not as well defined as it should be and this needs to be done to better target messaging and to collect supporting data. Critically, the discussants identified a need to be clear about what is being measured to demonstrate value as simply reporting clinical trial endpoints was insufficient. One problem they identified was that value was often equated with money and that this had created issues in the system as it is not a simple matter to derive where the value flows in a system. This really needs to be defined carefully as the entire enterprise needs to be considered rather than as siloed activities.

The discussants identified that there was a need to identify best practice in terms of clinical trial activity to ensure that operations were as cost-effective as possible and that the highest standards were being achieved. They identified that creating a skilled workforce would reduce net costs through clear efficiency that would reduce the overall net costs of running individual trials. However, the current financial management systems were operating against certain types of efficiency as a site KPI was total revenue and any reduction in this would be seen as a negative. However, clinical trials do not inherently generate surplus income (despite the prevailing belief) and any efficiency would deliver advantages to both sites and sponsors.

The table also identified issues with the current academic approach to integrating research into teaching and training in hospitals which did not lend themselves to supporting clinical trial activities. Novel approaches were required for recognising the value of trainee projects in clinical trials even where they did not see the entire trial through to fruition due to time constraints. A nationally harmonised approach is needed to ensure that how this is achieved is equitable and standardised. Achieving this would be difficult in the current environment and whilst the National One-Stop Shop has an intention to seek nationally harmonised processes the discussants did not necessarily agree that this would achieve this end in the short term.

The National Clinical Trials Governance Framework (NCTGF) was seen as an important lever in persuading sites of the value of trials, or at least to take their management more seriously, but there were concerns that executives may treat this as a burden or just a box-checking exercise rather than an opportunity to truly integrate clinical trials as a core and valued activity. Discussants believed that the recent experience with COVID had raised the visibility of research in the minds of the public and health service managers, but this is yet to be tested in terms of translating into tangible and sustained support for the sector. Working closely with the community who had experienced benefits was seen as important as they would be a strong ally, though weariness with COVID might have an unintended effect. A novel approach employing campaign/promotional material and using new channels for marketing the value of trials is needed but there was caution expressed over health services or industry doing this due to perceived or actual conflicts of interest. It was thought that ACTA could play such a disinterested role arguing the value from a common good perspective.

The biomedical manufacturing industry is one of Australia's largest export activities by value (currently estimated to be placed fourth in terms of advanced manufacturing exports), and there is an economic argument for supporting a home-grown industry integrated with clinical trial capability to prove the safety and efficacy of the discoveries. For example, moving them from pre-clinical through the clinical life cycle and to distribution globally. There is no integrated funding model for this, and whilst the MRFF was raised as a possible source, it is not clear how this would work given its Act. However, this is something which is receiving attention from MTPConnect. Discussants believed that a systematic health economic and business economic analysis is required to truly understand the value of clinical trials in Australia and to build business cases for greater investment. It was not clear who would or could lead this work.

7 Potential ACTA activities under work areas from the discussion

The roundtable identified some clear areas of work that ACTA could lead through its working group. This would require the formation of working groups with project manager resources to undertake specific work activities. The possible areas have been aligned with existing ACTA activity areas, which include:

1) **Advocacy and thought leadership/Embedding Clinical Trials in Healthcare:** Work to identify and define key policy areas required for enhancing clinical trials activity as well as to enhance greater collaboration between industry and academia. This would include work to examine broader definitions of 'end user' to ensure that engagement with these stakeholders was defined appropriately so that they could be included in the policy work. The policy work would encompass defining 'value' as a core policy for health services.

2) **Innovative outcome data/Innovative trial design/Registries special interest group:** Establish a sub-working group within these three existing ACTA activities dedicated to exploring RWD/RWE to examine opportunities for new collaborations and trial opportunities.

3) **Innovative trial design:** Establish a working group that includes industry representatives to explore how the academic sector currently conducts trials that utilise regulated therapeutic goods, including multi-therapeutic trials, and develop a best practice guidance for Clinical Trial Networks.

4) **Embedding Clinical Trials in Healthcare:** Work with industry, sites, and professional groups to develop a coordinated approach to professional development and more standardised positions for clinical trial professionals.

5) **Engagement with Australian-based pharma and biotech:** Emerging Australian pharma and biotech often take trials off-shore, typically, using overseas based CROs. ACTA should act to provide linkage between Clinical Trial Networks and local companies to provide advice on optimal trial design or undertake design and conduct of trials in Australia, particularly exploratory trials, or both.

The aim of these activities should be to fulfil Activity 5.2 of the ACTA MRFF grant '*Leverage expertise within CTNs and CCs by partnering with Industry to assist with one or more of trial design, site identification, and trial conduct for industry trials*.' Each activity will need to align their objectives with meeting this objective.

8 APPENDIX A: Roundtable Attendees

Name	Organisation
Alan Cass	Menzies School of Health Research
Amy Sillett	AstraZeneca
Ana Svensson	Novo Nordisk
Anna Lam	Janssen Pharmaceutical Companies of Johnson & Johnson
Anthony Barnetson	Vifor Pharma
Bruce Neal	The George Institute
Carmel Hawley	Australasian Kidney Trials Network (AKTN)
Cassandra Cordwell	Roche
Cecilia Ng	National Endometriosis Clinical and Scientific Trials (NECST)
David Wilks	Bristol Myers Squibb (BMS)
David Bunker	Australian Health Research Alliance (AHRA)
Delaine Smith	The Australasian Leukaemia and Lymphoma Group (ALLG)
Denise Caruso	Australia and New Zealand Sarcoma Association (ANZSA)
Durga Bastiras	Australian Orthopaedic Association National Joint Replacement (AOANJRR)
Eng-Siew Koh	Cooperative Trials Group for Neuro-Oncology (COGNO)
Falko Thiele	Biotronik
Fiona Hegi-Johnson	Trans-Tasman Radiation Oncology Group
Fiona Nemeh	Australian Clinical Trials Alliance (ACTA)
Greg Sharplin	Australasian Nursing and Midwifery Clinical Trials Network (ANMCTN)
Jane Kelly	CMAX
Jessica Southwood	SA Regional Clinical Trials Coordinating Centre
Jodi Glading	Department of Health Tasmania
John Zalcberg	Australian Clinical Trials Alliance (ACTA)
Lillian Leigh	Thoracic Oncology Group Australasia (TOGA)
Linda Brown	Palliative Care Clinical Studies Collaborative (PaCCSC)
Lorraine Chantrill	Australasian Gastro-Intestinal Cancer Trials Group (AGITG)
Louise Erickson	Sanofi
Maria Kirby	The Australian and New Zealand Children's Haematology/Oncology Group (ANZCHOG)
Martin Stocker	NHMRC Clinical Trials Centre
Meg Jardine	Faculty of Medicine and Health, NHMRC Clinical Trials Centre
Melissa Hagan	Department of Health Queensland
Michael Mihatsch	Australian Clinical Trials Alliance (ACTA)
Nick Pavlakis	Thoracic Oncology Group Australasia (TOGA)
Nicole Millis	Rare Voices Australia
Nik Zeps	Chrysalis Clinical
Nikhil Jha	Canberra Health Services
Omar Hassanzai	GSK
Peta Garrett	Research Australia
Phyllis Lau	Australasian Association for Academic Primary Care (AAAPC)
Raj Gauba	BeiGene
Robyn Clark	Australian and New Zealand Alliance for Cardiovascular Trials network (ANZACT)
Sean Emery	University of New South Wales (UNSW)
Shanny Dyer	ARCS Australia
Shirley Sin	AbbVie
Steve Webb	Australian Clinical Trials Alliance (ACTA)
Stewart Hay	Australian Clinical Trials Alliance (ACTA)
Susan Rossell	Mental Health Australia General Clinical Trial Network (MAGNET)
Suzanne Chen	PPD
Tony Penna	New South Wales Health
Trina O'Donnell	Bellberry Limited
Vera Terry	OMICO (Australian Genomic Cancer Medicine Centre)
Vika Potarina	Chrysalis Clinical

9 APPENDIX B: Sector Survey

Dear roundtable invitee,

Prof Nik Zeps from Chrysalis Clinical will be facilitating a roundtable session on behalf of Australian Clinical Trials Alliance (ACTA) on the 29th of April 2022. The purpose of this meeting is to help identify barriers and enablers for greater partnership between industry and the investigator-led clinical trial sectors.

We would like to invite you to provide your views via the below survey form ahead of this meeting. Your input will help guide and focus discussions on the day.

It will take approximately 10 minutes to complete, and your responses will be confidential.

Questions

1. Which category best describes you?
    a. Industry
    b. Academic
    c. Consumer
    d. Jurisdictional Health Department
    e. Other

2. What do you consider to be the key benefits of collaboration between industry and investigator-led clinical trial sectors?

3. What are the barriers to collaboration for investigator-led and industry partnerships in clinical trials?

4. Are you aware of any initiatives underway which will further enable investigator-led and industry partnerships in clinical trials? Yes/No

    a. If yes, please provide details including how this is anticipated to support industry partnership

5. How can clinical trial networks further support industry?

6. How can industry further support investigator-led and registry data-informed clinical trials sectors?

7. What do you consider to be the key workforce training and development needs to best support this partnership?

8. Other comments (Optional field)

9. Consent to being contacted prior to the ACTA roundtable meeting to discuss the responses if required. (Optional field)

10 Appendix C: Pre-roundtable Survey Results

Which category best describes you?

Figure 1 provides a breakdown of the participant categories providing feedback to this survey. In summary, there were 13 responses from the academic sector, 9 from industry, 6 from jurisdictional health departments, 3 consumers, 1 trial site, 1 Clinical Quality Registry (CQR) and 2 from other sectors.

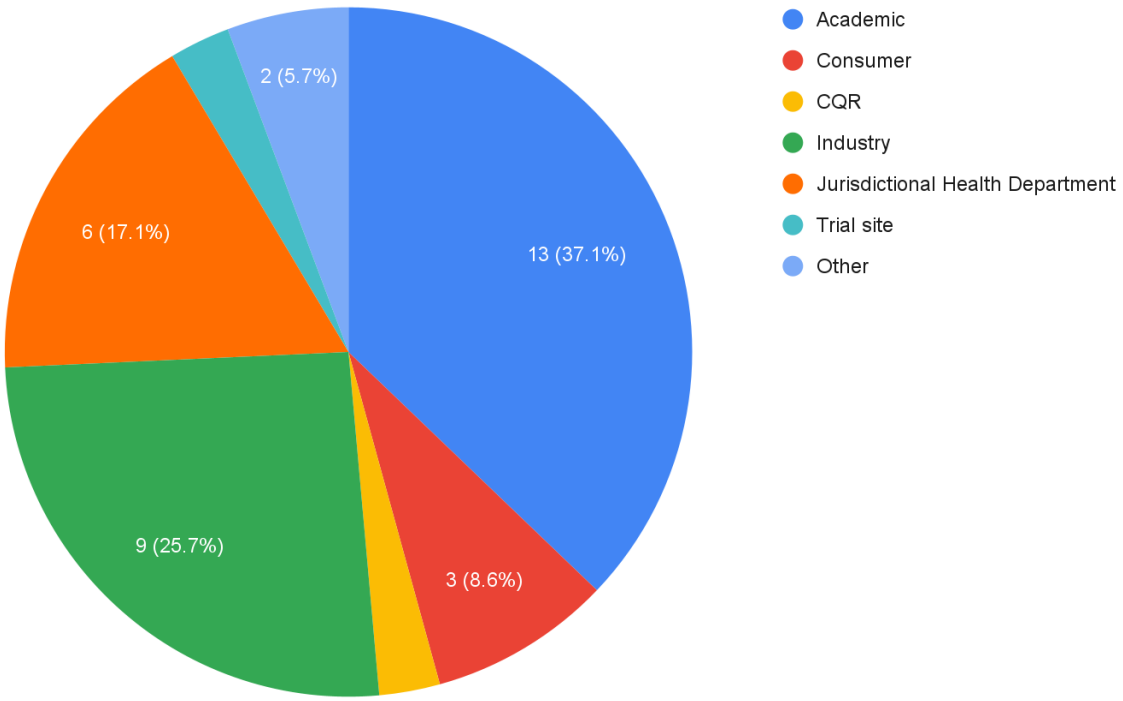


Figure 1. Categories of participants providing responses to the pre-meeting survey.

Key Benefits of Collaboration between industry and investigator-led clinical trials

Survey respondents were largely supportive of working toward greater collaboration between the industry and investigator-led clinical trial sectors. From the responses provided, eight key themes were identified as benefits to a stronger partnership with industry (summarised in Figure 2).

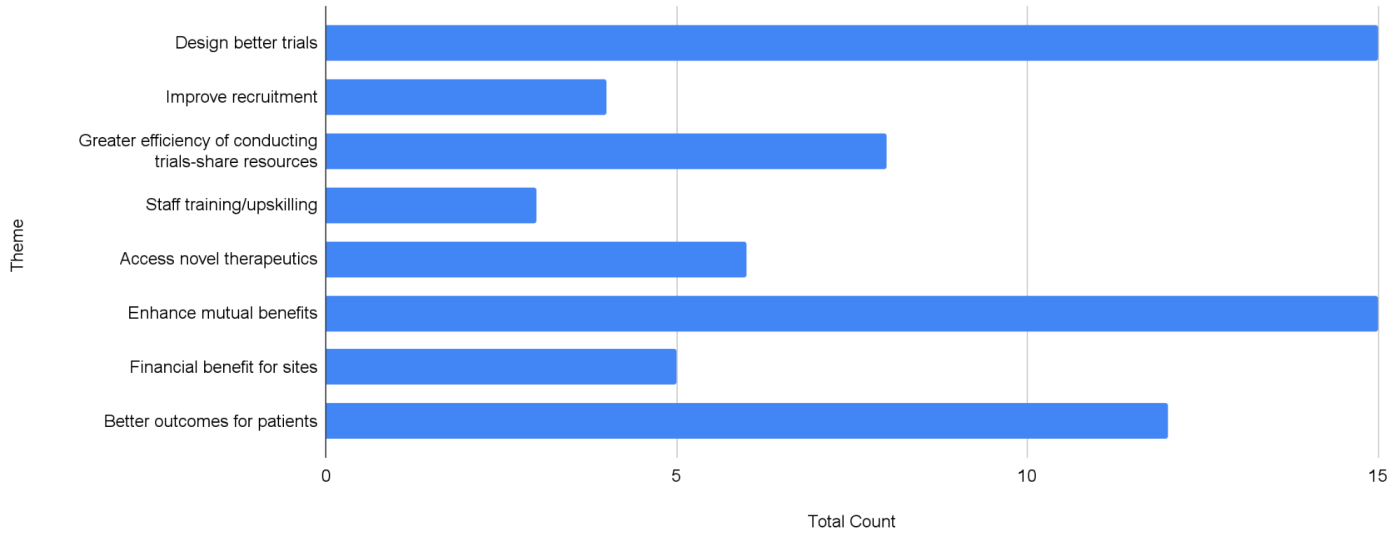


Figure 2. Key benefits of collaboration between industry and investigator-led clinical trial sectors.

Survey respondents believed that greater collaboration would lead to the design of better trials resulting in faster times to implementation of results. The majority saw clear mutual benefits such as improved access to trial resources, infrastructure, and access to drugs for academic trials. Other themes identified included greater efficiencies through sharing of resources, financial benefits for sites including building capacity through funding as well as upskilling staff (including cross fertilisation of staff and ideas). Generally, the themes identified were similar across both academic and industry sectors with training and upskilling of trial staff described as an additional benefit by the academic sector and jurisdictional health departments.

Questions for the roundtable discussion

- Do you agree with the key benefits identified? Are any missing?
- Why are trial designs better through collaboration?
- How can trial sites benefit financially from greater industry-academic engagement?
- What has prevented greater sharing of trial resources previously?

What are the barriers to collaboration for investigator-led and industry partnerships in clinical trials?

From the 35 responses received, eight key themes were identified as part of the response to perceived barriers to academic and industry partnerships in clinical trials (summarised in Figure 3).

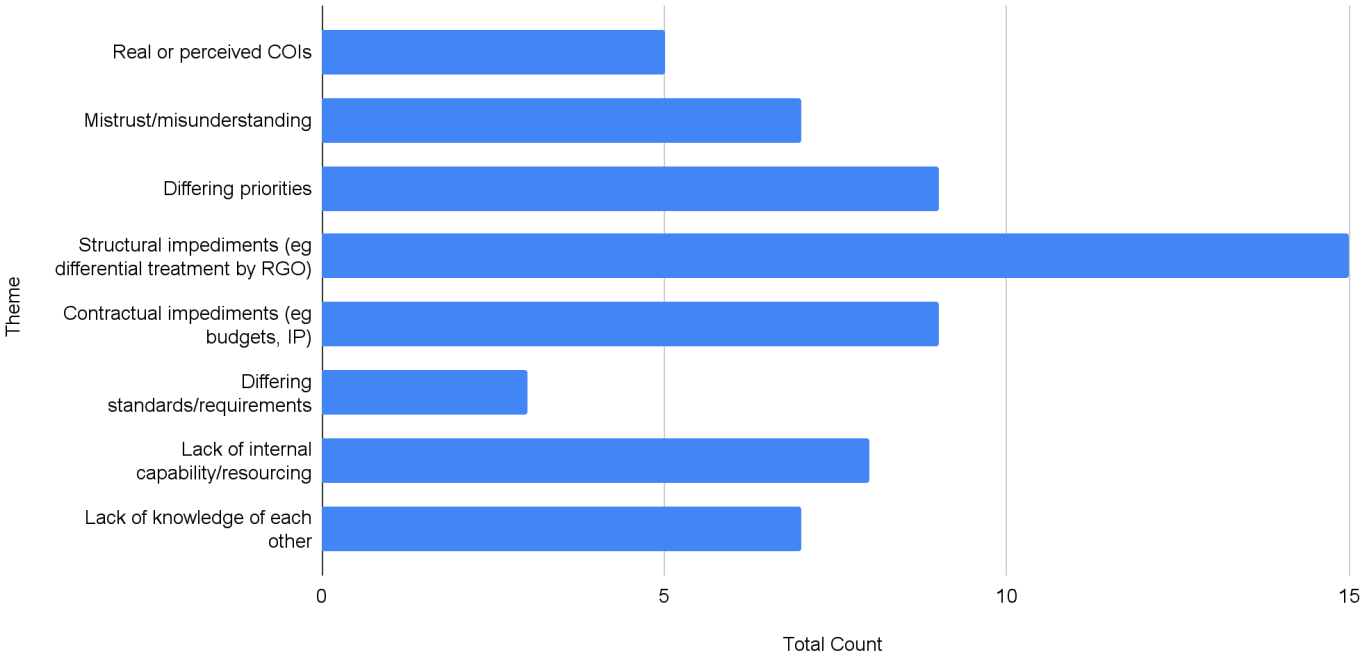


Figure 3. Barriers to collaboration for investigator-led and industry partnerships in clinical trials.

The leading theme (15 responses) was in relation to structural impediments such as 'red tape' and the way organisations managed this through the Research Governance Offices (RGOs). Stakeholders also identified that there were differing priorities for the two sectors; for instance, industry led trials may want to accelerate the trial to rapidly bring a new drug to market while investigators may opt for decade-spanning trials to investigate longer term effects of interventions. Broadly, there was a belief that there was an overall lack of internal capability (staff resourcing, understanding of industry standards, internal funding to support trial infrastructure) that created significant barriers to greater collaboration.

Questions for the roundtable discussion

- Do you agree with the barriers identified? Are any missing?
- Are the barriers universal or found in specific instances?

Knowledge of current initiatives underway, which will further enable investigator-led and industry partnerships in clinical trials

Of the 35 responses received, only 14 stated that they were aware of current initiatives underway that would further enable investigator-led and industry partnerships in clinical trials (summarised in Figure 4).

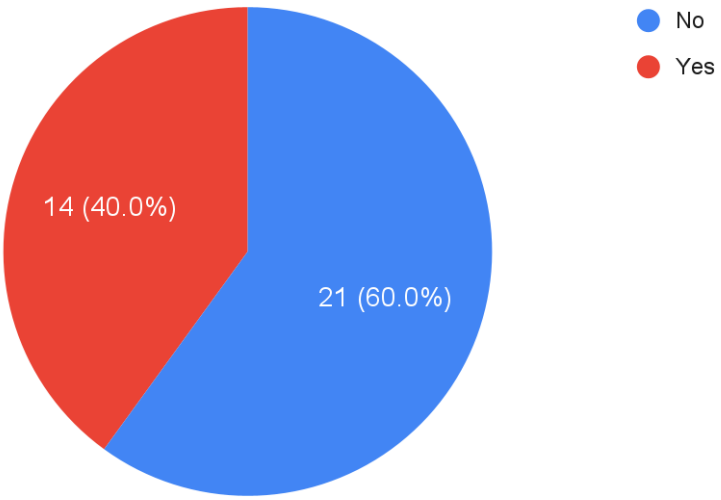


Figure 4. Number of participants aware of further initiatives to enable industry partnerships in clinical trials.

Several initiatives described were existing activities related to harmonisation of administrative processes such as Clinical Trial Research Agreements (CTRAs). Some considered that initiatives such as the investment in teletrial capabilities and the 'One Stop Shop' presented opportunities for greater engagement and streamlining of capabilities, whilst others were less optimistic about these. Several identified the need to overcome a lack of knowledge that each sector has of the other, pointing to initiatives in other countries that had tackled this (i.e. the Patient-Centered Outcomes Research Institute (PCORI) in the US, and the National Institute of Health Research (NIHR) in the UK).

Questions for the roundtable discussion

- Are there specific initiatives that the sector should be aware of?
- Why has there been a lack of engagement?

How can clinical trial networks further support industry?

Based on responses, six key themes were identified (summarised in Figure 5). The main themes were that clinical trial networks could support greater engagement between the academic and industry sectors as well as supporting alignment of practices (streamlining of processes and building of capacity). Several responses suggested clinical trial networks could also support industry through education and training.

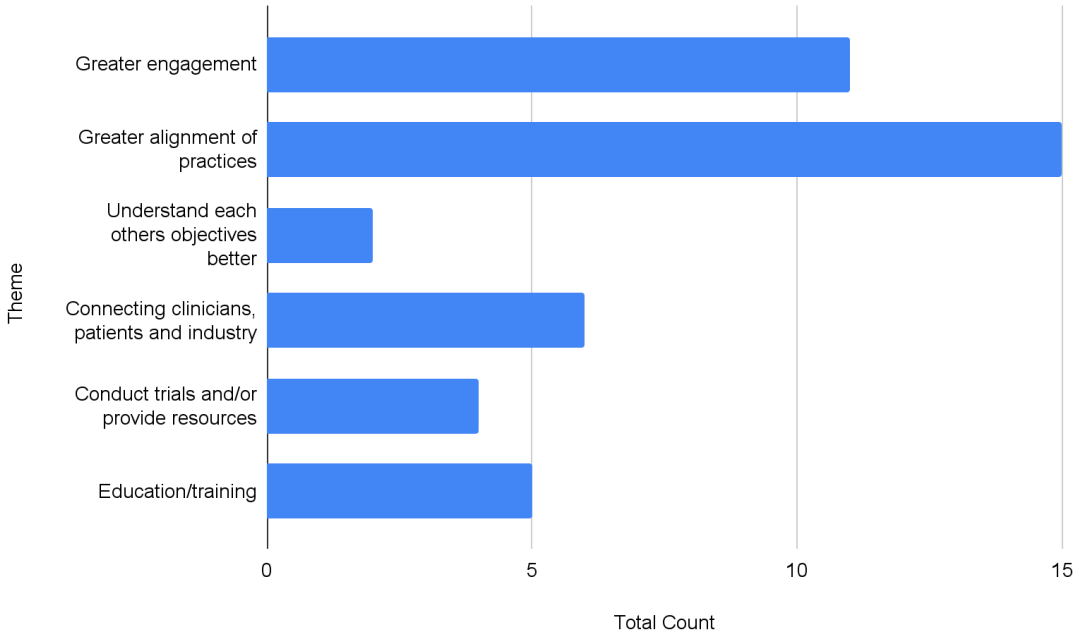
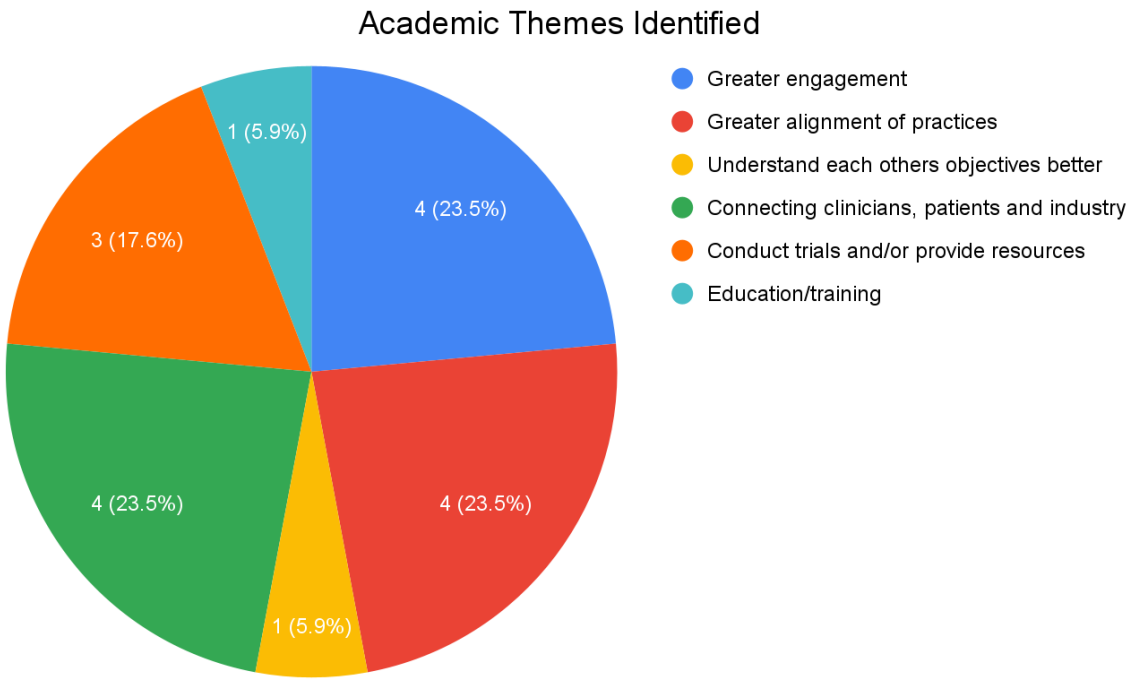


Figure 5. How clinical trial networks can further support industry - key themes

From a sector perspective alignment of practice appears to be more important to industry than academic sector (Figure 6), whilst connecting clinicians, patients and industry appears to be more important to the academic sector.



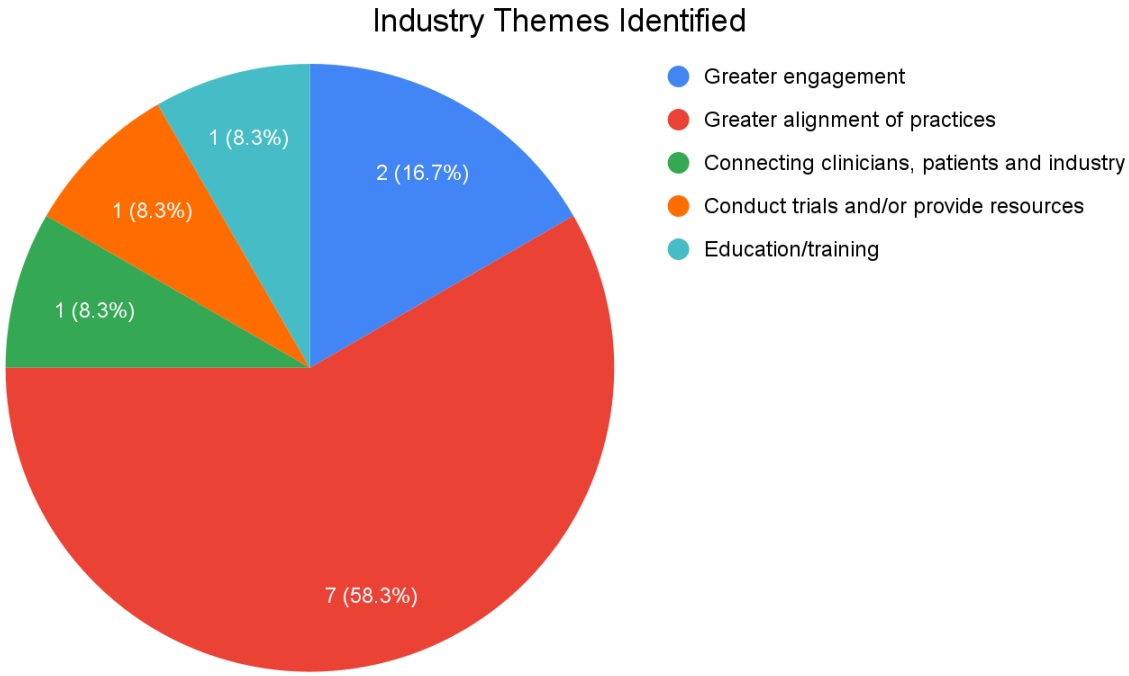


Figure 6. Academic and Industry themes - How clinical trial networks can further support industry

Questions for the roundtable discussion

- What do we mean by alignment of practice?
- Why would connecting clinicians, patients and industry potentially be more important to the academic sector. For example, are there already mechanisms in place to support this within industry?

How can industry further support investigator-led and registry data-informed clinical trials sectors?

Based on responses, eight key themes were identified for how industry can support investigator-led and registry data-informed clinical trials sectors (summarised in Figure 7). Many survey respondents believed industry could further support the academic sector through provision of financial, resource or infrastructure support.

Other key themes were alignment of expectations as well as actively seeking greater collaboration with the academic sector such as reaching out and partnering with ACTA member organisations or working together to develop technology infrastructure for support of registries and data linkage. Both appeared to be a more common theme in response from industry (Figure 8).

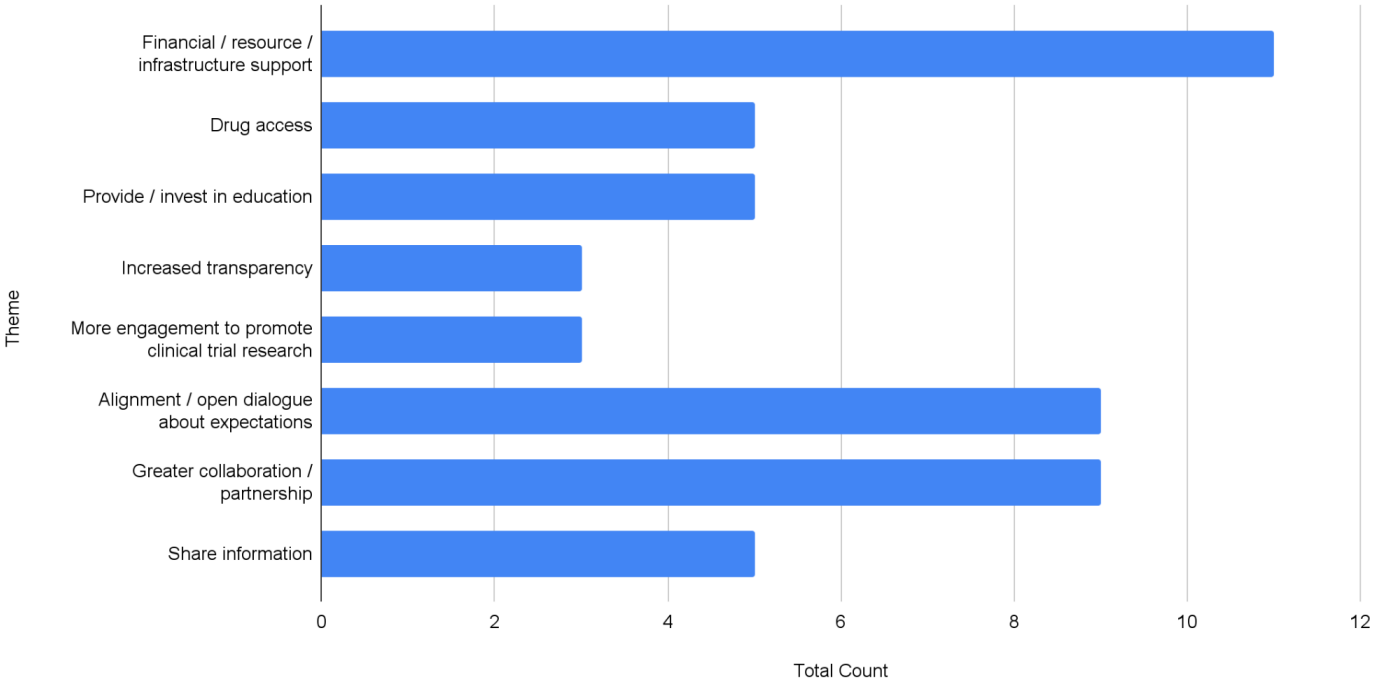


Figure 7. How can industry further support investigator-led and registry data-informed clinical trial sectors - key themes

When the responses were aligned with the sector responding, financial incentives were much more important to the academic sector than for industry. Academic respondents also identified gaining access to drugs as an important support industry could provide, whereas this was not seen as being as important from an industry perspective. Overall, industry respondents saw a greater need to ensure there was mutual alignment on expectations from a collaboration but also expressed that such collaborations were of a high priority to them.

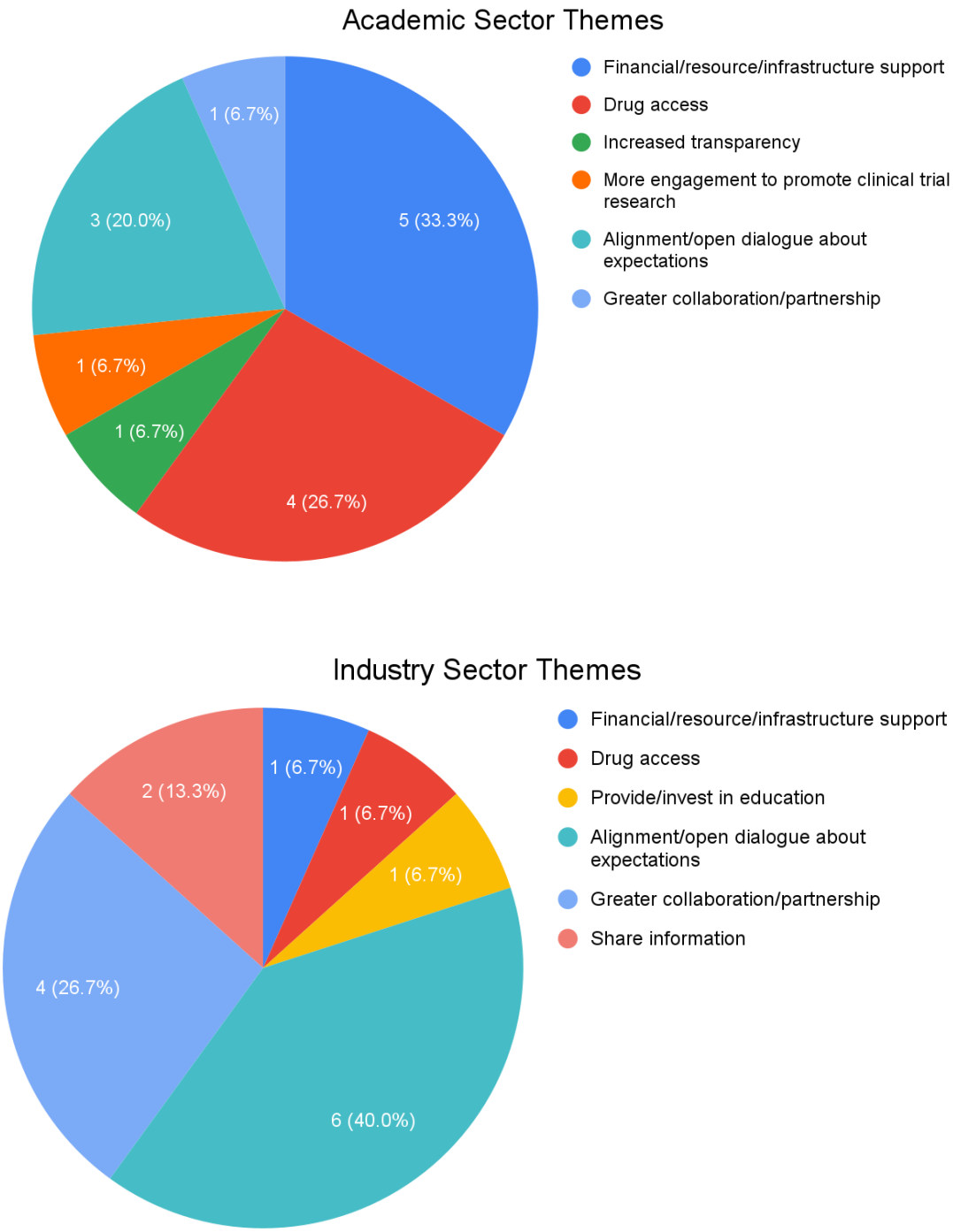


Figure 8. Academic and Industry themes - How can industry further support investigator-led and registry data-informed clinical trial sectors

Questions for the roundtable discussion

- Do you agree with the themes identified? Are there any missing?
- Are the expectations of each other well aligned? How can this be improved upon?

What do you consider to be the key workforce training and development needs to best support this partnership?

Figure 9 provides a summary of key themes for workforce training and development needs to best support a partnership with industry. The three main themes were centred on career development pathways (combined business and medical degrees, cross over placements, mentorship), educational courses and training in roles, responsibilities, and processes (including project management, trial methodology, conflicts of interest). These were common perspectives across both academic and industry sectors, with training in roles and responsibilities a stronger theme in the academic sector. In one instance it was viewed as the government's responsibility to ensure sufficient national training and development for Australia's health and research sector workforce.

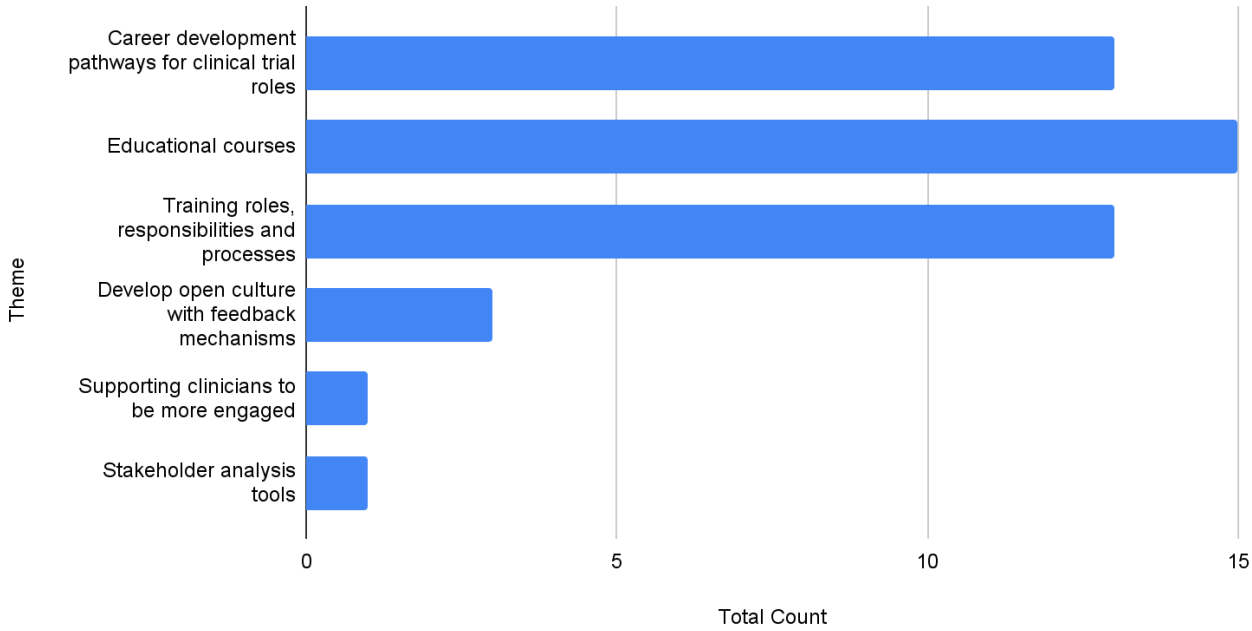


Figure 9. Key workforce training and development needs – identified by survey respondents

Additional themes included developing an open culture with feedback mechanisms to allow for effective collaboration, (identified by industry sector representatives) as well as supporting clinicians to be more engaged in clinical trials (to integrate more with healthcare delivery/core business).

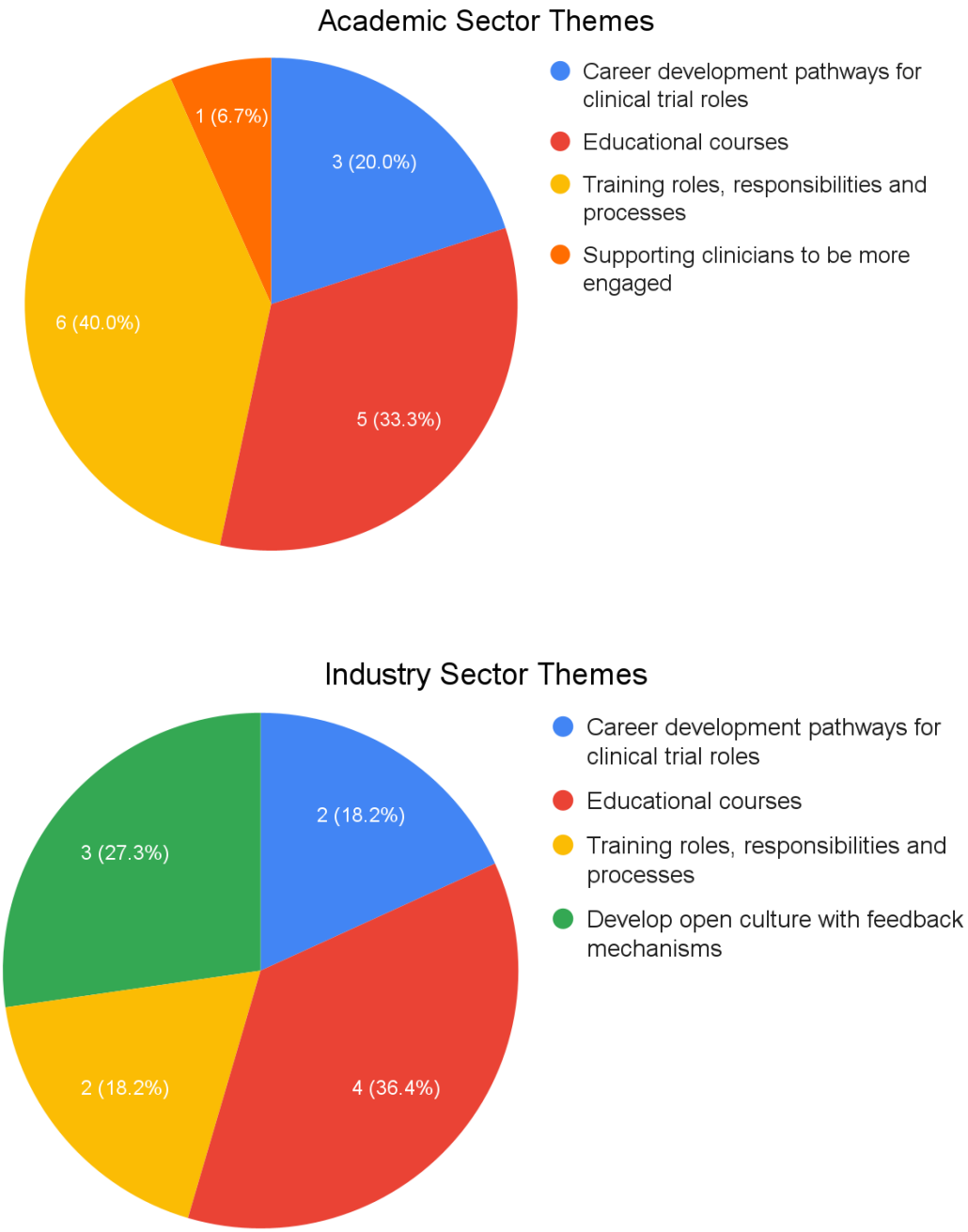


Figure 10. Key workforce training and development needs identified by academic and industry sectors to best support partnership with industry

Questions for the roundtable discussion

- Do you agree with the training and development needs identified? Are there any missing?
- Whose responsibility do you think it is to develop a national training and career development pathway?

11 Appendix D: Survey Responses - Key Benefits of Collaboration

Sector	Responses - *What do you consider to be the key benefits of collaboration between industry and investigator-led clinical trial sectors?*
Academic	Achieve more
	Improves quality of trial design, speeds trial operations and result implementation
	Health impact, institutional financial sustainability, business outcomes
	Relevance to practice important source of funding for research
	Outcomes which benefit the patient and helps the clinician to deliver better care
	Leveraging expertise and resources
	Reducing waste, pursuing better research questions, better use of money and improved patient outcomes
	Expanding portfolio of work
	Get 'fit for filing' data and novel agent access for longer duration, more complex (and meaningful) endpoint cooperative group / investigator led studies
	Access to new medicines
	Rigorous research with patient outcomes as a key driver; cross training and fertilization of staff and study ideas; ability to partner with industry to arrive at wins for both parties - which may be different but aligned; engagement with health workforce and policymakers that leads to changes in practice; taking best evidence to practice; the requirement for academics to publish results regardless of outcome and reduce research waste; value for money; industry partner with government when medication is listed why not partner with investigators during development phase
	Patient access to clinical trials, followed by economic and innovation in health and medical research
	Patients getting access to new medicines through trials designed for them by those that understand the biology of the disease and current treatment outcomes
Consumer	Pooling of expertise, resources and funding for subject recruitment, monitoring, trial design and outcomes. Industry can either support or develop trials however investigators, often academia or practicing clinicians, have developed personal relationships with patients and are the greatest connections to the subject population. Having more partnerships also increase objectivity of subject recruitment and accountability in data collection. A trial monitoring panel could comprise of members from both parties to report ongoing events.
	Collaboration benefits both the industry and academics; it allows academics to access resources that are much needed and hard to come by (e.g., study drug or funding); it is hoped that collaboration would allow important clinical questions to be answered for the benefit of consumers (e.g., questions that the industry doesn't necessarily have the incentives or clinical experience to conduct research about).
	Faster access to treatment. For many rare disease patients, participation in a clinical trial may be their only way to access treatment
CQR	Cost effectiveness: Collaboration with the subject matter experts, we can streamline the discussion process involved in establishing the trial infrastructure. By leveraging on both stakeholders, we can exchange insights and learn more. Benefit to patients/community: both the investigators/industry have the interest of the patients related in their section to improve patient outcomes and their safety. With the collaboration in trials, both stakeholders can navigate towards improving and creating new technologies/etc. which assist with patient outcomes.

Sector	Responses - *What do you consider to be the key benefits of collaboration between industry and investigator-led clinical trial sectors?*
Industry	Discover innovative therapies to high unmet medical needs
	Clinical experience with important therapeutic agents in real world settings
	A more efficient clinical trial process with a focus on patient centred outcomes as compared to traditional registrational trials
	Important mechanism for engaging academic and innovators in areas of mutual scientific interest. Also, a key benefit to answer valid scientific questions and data generated by the sponsor will complement the existing body of industry evidence.
	Knowledge/resource sharing (stronger research sector, globally competitive, cost savings); Patient/healthcare system benefits (integration of research into our healthcare pathway (not an add on), increased community awareness and patient involvement
	Partnership in science, thought leadership, expertise, resources to benefit Australian patients
	Industry and investigator-led clinical trial sectors both have the same goal to contribute to research and development of new therapies to improve patient lives and/or contribute to a greater understanding of disease state/scientific knowledge. Through collaboration, with appropriate governance, industry can provide funding and/or product support to investigator-led research which contributes to the feasibility to initiate and conduct research which often requires significant investment. Together, there is an opportunity to advance science.
	Access to scientific data and relationship building
	Investigating hypothesis, and generating further opportunity for large scale trials
Jurisdictional Health Department	Industry sharing knowledge of quality systems and IIT led trials sharing clinical insights
	Industry's involvement allows the local areas to see how trials are conducted (they gain skills vicariously through seeing on they are managed by industry), and it also allows the seeding funding needed for purely lead investigator-initiated studies that would unlikely funded through other mechanisms.
	(1) more efficient delivery of trials; (2) adoption of new trial designs and methodologies; (3) sharing of resources and infrastructure
	Opportunities to trial new products, repurpose existing products and to potentially use products that have been developed but have not found a clinical use (orphan products)
	Increase capabilities of trials site Long-term benefit to industry partners because of increased capabilities Codesigned processes and solutions which reduce friction Upskilling of PIs and Coordinators Greater cross-institutional learning -> prevent failed undertakings from being replicated
	Unsure
Other	A better understanding of each other's needs
	Interesting scientific questions that can result in market benefits to industry; studies that have major impact on health care and clinical practice - patient first, market second.
Trial Site	Empowering our doctors to write Protocols and collaborating with industry to their IMP etc. Further, collaboration between university and hospitals is positive and generates great outcomes for patients.

12 Appendix E: Survey Responses - Barriers to Collaboration

Sector	Responses - *What are the barriers to collaboration for investigator-led and industry partnerships in clinical trials?*
Academic	Perceived conflicts of interest; vested interests
	Values and agendas that do not harmonise; investment in niche areas where there may not be perceived market return
	Mistrust, misunderstanding, inadequate systems, failure to connect
	Regulations +bureaucracy+ conspiracy theories
	Finding and defining the outcomes that are beneficial to both the Investigator and the Industry partner, and ethics/research governance
	Unacknowledged similarity in goals of each party which may be shared between the parties but there is no conduit to bring them together; suspicious of each other; concerns over study design and industry interference; possible slowness of universities to respond in timely business-like manner;
	Resourcing and for us the business case for industry to invest in rare cancers
	Intellectual property and the business side of running research
	Operational complexity, high barrier to entry in terms of skills, knowledge, and commitment, and (fundamentally) that the health system is focused on cost and not value and outcomes.
	Identifying suitable industry partners,
	Perceptions of Australia as a future market
	Commercial imperatives (esp for 'second use' which is less likely to lead to major revenue increase e.g., children, rare tumours / diseases or less likely to recoup investment if 'initial' indication fails)
	Red tape
Consumer	Conflict of interest in which diseases and conditions to fund research e.g., rare diseases. Industry is often focused on move drugs and therapeutics while investigators may endeavour to improve current treatments and investigate their safety. There may be different regulatory guidelines for investigator versus industry led trials. The timeline of certain trials may pose a barrier, for example, industry led trials may want to accelerate the trial to be the first to market a new drug while investigators may opt for decade-spanning trials to investigate long terms interventions especially in the field of genetic modification and nutrition.
	Perceived risk that the industry will influence academics - commercial decisions will outweigh science such that certain trials with higher chance of profit will be run over those with less likely profit (e.g., rare diseases); industry partnership may therefore restrict academic freedom. Industry may potentially block publication as well?
	Perceived conflicts of interest? Need to manage. Scientific/ research drivers must not be unduly influences by commercial interests
CQR	Ethics/research governance approval: Often these trials are deemed as non-investigator initiated as there is an involvement with industry. This then leads to a higher fee for ethics/rgo review and at some time the risk pathway. In addition, some RGO's legal review, the need for a CTRA with increased indemnity (industry/surgeon to indemnify site) may arise which the industry/investigator may not be able to do so.
Industry	Better understand of drug discovery and market dynamics
	incredibly onerous legal interactions with institutional legal teams; the ongoing need for multiple reviews across different institutional departments; shortage of site staff to recruit in a timely manner;
	Internal process and legal review to seek agreements between industry and hospitals/universities

Sector	Responses - *What are the barriers to collaboration for investigator-led and industry partnerships in clinical trials?*
	The research to be conducted is of robust and ethical design, sometimes as industry we receive proposals which are not well-thought through studies that enhance delivery of innovative therapies to patients, enhance patient care, and align with industry strategic areas of interest
	Time/resources - effective facilitation mechanism for impact and action - attitudes
	Global competition, science meeting an unmet need that aligns to sponsor companies' strategy
	Perception that industry influences the partnership which can be negated with appropriate governance, transparency, and of course legal agreements. Complexities of negotiating different companies review and approval processes, different levels of collaboration, and if approved complex and lengthy legal agreement negotiations, which may also involve global company review and fair market value assessments. Perhaps also a lack of advanced consideration by both parties when it comes to data access, licenses, and intellectual property ownership and what the funding/supporting/collaborative partner may or may not gain - legal teams are considering this in more detail but not teams who run and manage studies which can then delay contract negotiations. In some cases, investigator-led research may involve staff who have had academic research experience but not industry research experience and this can create differences in understanding of roles and expectations. Some companies allow the support of ongoing disease registries under their research grant framework whilst others may not and require that these be managed as ISS/ESC which can prohibit support given the requirements that ensue which the sponsor may not be willing to undertake.
	Funding, potential for politics, potential rights to IP
	Funding, and notoriously delay deliverables/milestones from the trial. Trials are considered high risk, and the internally local funding models need to improve too.
Jurisdictional Health Department	Industry uses clinical trial data for regulatory applications, IIT Led use data for publications. Barriers are then data quality. Sponsor responsibilities. IP and IP (Intellectual Property AND investigational Product). Data Ownership. Publication. R&D priorities. Funding.
	In my jurisdiction it is a lack of a sophisticated clinical trials space. We are starting to get things better organised, but we don't have a process for putting our hand up (other than maybe for cancer trials which have their own connections) to get industry to think of us as a good place to do research. We don't have the system and processes in place to make us look attractive (e.g., we don't have systems that will give us good details on likely recruitment numbers, timeframes to getting studies up and running etc.).
	(1) IP; (2) Inefficient research governance; (3) IT and data management infrastructure
	The competitive drive of investigators sometimes undermines the collaborative nature of the venture. Engagement is occurring with existing key opinion leaders or networks in the context of patient cohorts that are increasingly 'rarer' as a result of precision medicine - which means that the pool of patients required can only be accessed/recruited with a more expansive engagement of clinicians not just trialists!!!
	Mismatched priorities and mental models Lack of transparency Lack of system and process integration/alignment Lack of technological consistency
	Matching investigators to industry and forming relationships, negotiating contracts, ownership of data
Other	Balancing the resources at sites; cost impact on sites; pragmatic vs registration quality – equates to time, cost, and efficiency metrics

Sector	Responses - *What are the barriers to collaboration for investigator-led and industry partnerships in clinical trials?*
	Misunderstanding of the roles each group has.
Trial Site	Funding, institution sponsor frameworks – sites don't really know the requirements of being a sponsor, cost and resource input, site expertise. I would like to see more Governance Offices integrated into the trial unit working closely with the doctors on their sponsor requirements. Further, with the help of the clinical trial governance framework, sites need to have clear roles and responsibilities in their sponsor framework, conducting risk assessments and identifying their gaps in how they can sponsor a clinical trial.

13 Appendix F: Survey Responses - Initiatives

Sector	Responses (where provided) - *Are you aware of any initiatives underway, which will further enable investigator-led and industry partnerships in clinical trials?*
Academic	I'm dubious of likelihood of success as uncoordinated, poorly informed and lacking real focus in design
	NSW OHMR initiatives https://www.medicalresearch.nsw.gov.au/clinicaltrialsnsw/
	PCORI in the US and the NIHR have engagement with industry I believe but also work with academics and consumers to improve the research questions
	My partnership is developing a business case for a virtual service to better enable investigator-led trials. Also, the national Australian Teletrials Program.
	Gov initiatives i.e., grants, NOSS.
	Accelerate initiative in childhood cancer (multinational regulator / academic group / industry stakeholder workshops). Omico in Australia (molecular data as 'bait' to encourage industry studies).
Industry	Research Governance Framework hopefully will support alignment of all research within our institutions, consistent approach
	Move to support externally sponsored collaborations (ESCs) which allow industry to initiate research ideas with investigator-led sector, and potentially other funding bodies, to contribute to advance science in areas of joint interest.
Jurisdictional Health Department	Firstly, I should note that Industry in Australia shared their Medicines Australia clinical trials contract template about 15 years ago so collaborative trial groups could realise the same contract review efficiencies. Some other initiatives to note have started overseas- we should join, learn, and leverage that work. The Clinical Research Data Sharing Alliance (CRDSA) is a new multi-stakeholder consortium that serves as an umbrella organisation for the clinical data-sharing ecosystem. Our members include biopharma companies, nonprofit data sharing platforms, academic institutions, and service and technology partners. This diverse and growing group of stakeholders comes together with the shared goal of accelerating the discovery and delivery of lifesaving and life-changing therapies to patients by expanding the research value of the high-quality data collected through the clinical trial process. Also, Clinical trials, which are funded by a cooperative agreement or individual grant or contract award, often utilise one or more investigational agents which are proprietary to a pharmaceutical and/or a biotech company (hereinafter, Collaborator). In this circumstance, the NCI has negotiated and executed a collaborative agreement, either a Cooperative Research and Development Agreement (CRADA) or a Clinical Trials Agreement (CTA), for the clinical co-development of the agent. The CRADA is a statutorily based mechanism created under the Federal Technology Transfer Act of 1986 for the purpose of facilitating Government-Industry collaboration and technology transfer. The CTA is an NCI-initiated mechanism for the clinical co-development of an agent. Finally, we can learn a lot from https://www.transceleratebiopharmainc.com/assets/historical-trial-data-sharing-controls-solutions/so, sponsors can share data better
	With the new Teletrials program, I'm hoping we can put in place some of the enablers to help the processes needed to become that high functioning system. By showing how we can do things as a satellite site and then expanding into running local trials at our larger hospitals with our local little hospitals being the satellite.
	The Australian Government's agenda to reform the Australian clinical trials environment will make it easier and more efficient to conduct clinical trials in this country. While activities under this agenda do not explicitly address partnerships between industry and investigators, they do hold the promise to attract more industry players and, therefore, provide more opportunities for partnerships. Major initiatives include the National Clinical Trials Governance Framework, which provides the "first step towards a nationally consistent approach to the accreditation of health services for the conduct of clinical trials", the National One-Stop Shop and Clinical Trials Front Door to "make it easier for

Sector	Responses (where provided) - *Are you aware of any initiatives underway, which will further enable investigator-led and industry partnerships in clinical trials?*
	patients, researchers, industry representatives and sponsors to find, conduct, participate and invest in high quality and ethical research in Australia", and the Encouraging More Clinical Trials in Australia measure, which seeks to "establish central points of contact to improve system navigation for sponsors and participants, streamline trial processes and time to trial start-up, and improve workforce capacity".
	Creating forums to bring clinician researchers and industry players together around focused agendas. there needs to be a concierge service that links researchers with industry. The challenge is to go beyond the current trialists - which means that whoever is running the concierge service needs to have a very good understanding of the sector (capacity and capabilities)
	More streamlined processes and increased capabilities that can be leveraged to support industry partnership
Other	Cooperative group networks; AusBiotech; AusTrade; Medicines Australia

14 Appendix G: Survey Responses - Clinical Trial Network Support

Sector	Responses - *How can clinical trial networks further support industry?*
Academic	Work together on projects
	Facilitate network, principles of engagement
	Being consistently better at what they do - regulatory, recruitment, follow-up, etc.... Probably significant opportunity for amalgamation, streamlining and efficiencies from standardisation and removal of reduplication
	Share vision / Shared data
	Don't know... Handling of the administration of the clinical trial... having more discussions with industry partners on the common areas of interest and patient care
	Training of staff (across all areas of clinical trials); pricing; partnering; write up and publication; statistically rigorous study designs;
	Do the trials for them
	Networks have a scale and reach that Industry can tap into which is especially useful for later phase trials and for trials of rare diseases. Also, networks can assist with connecting device manufacturers who are seeking guidance on their market and plan to trial.
	Connecting clinicians and patients with the industry-based trials.
	Ensure that the correct partnerships are identified
	By learning about how industry can further support clinical trial networks
	Simplified site access (i.e., cooperative group acts as 'one stop shop' to do site identification, shared set up, contracts etc.). Awareness of 'fit for filing' needs and build into study design.
	Industry needs to tell us that
Consumer	Clinical trials are required to provide evidence for industry-developed technologies thus collaboration is key. Networks should have an open mind to discuss research design and integrate both industry and community in the earlier stages of clinical trials development. Some ways clinical trial networks can support industry: - organise conferences for industry to gain insight into the medical landscape with appropriate scientific language - include industry representatives in peer reviews of previous research to develop feasible topics to research - respect and make a point to understand the business model of industry and how clinical trial partnerships ultimately improve patient outcomes
	No comment
	Need a rare disease clinical trial (and registry) network to make needs and opportunities more transparent.
CQR	Educating industry on the ethics/rgo requirements and providing them insights on CTNs trials, risk pathways and potential establishing a feasibility criterion (at basic level, perhaps catered towards CTN trials) for industries. This will allow industry to understand the basic requirement before commencing a trial.
Industry	Enable recruitment and facilitate ethical approvals
	Streamline processes and procedures as much as possible to facilitate prompt start up and then timely

Sector	Responses - *How can clinical trial networks further support industry?*
	recruitment and study completion.
	Local data generation across multiple sites
	Having Fair Market Value of costs to support research as cost of studies is always a consideration and discussion and needs to align in Australia
	Open dialogue and collaboration on how to place the right trials at the right centres to benefit our patients
	Power of aligned investigator approach to consistently deliver on project deliverables. Clarity between industry sponsors and investigators on strategy which then links into trial network strategy and then through to investigator led proposals which have higher chance of success
	Consider presentations/panel discussions of the opportunity that this provides that involves both industry and investigator-led sectors
	Consider how industry and investigator-led sectors can work together on training and development needs to support the partnership (i.e., internships, fellowships, scholarships).
	Ensure adequate study resources and meet milestones
	Improve Ethics and governance pathways
Jurisdictional Health Department	Upskilling of PIs, Protocol feasibility assessments
	Education and training are my biggest needs. If industry could support them without costing me a lot of money (because I just don't have it) then I could upskill the whole system
	(1) Encourage all parties to adopt more flexible IP positions. (2) Support system reform initiatives that will better facilitate high-quality clinical trials.
	Networks need to engage with the health system to seek support and coordination
	Better reporting and feedback processes
	Measurements and metrics to allow partners to be more agile
	Provide an understanding of the nuances of the Australian Trials Environment which may require redesign of processes and management of expectation
	Unsure
Other	Access to PIs, KOLs, broader relationships
	Provide opportunity to hear what the key issues are.
Trial Site	I will have to think about this.

15 Appendix H: Survey Response - Industry Support

Sector	Responses - *How can industry further support investigator-led and registry data-informed clinical trials sectors?*
Academic	Grants; product supply; allow new projects to be trialled in platform trials
	N/A
	Being realistic about costs, timelines, etc. While pushing for better.
	Infrastructure
	Some funding support, e.g., administration or management of the registry or database or recruiting participants
	Reach out and partner with ACTA member organisations in their particular field or area of medicine; look at the establishment of partnerships to repurpose medications for new indications - much cheaper and many medications are regularly used off label - can be driven from clinicians' observation level or from a data level;
	Provide drugs for free, fund trials for orphan drugs
	Collaboration on identifying current clinical challenges and target areas for future research.
	Supporting a pipeline of clinical trials, more engagement with the health system in which the trials are conducted to describe the value.
	Advertise the types of research, patient types and methods they are interested in investigating links with
	By learning about what the clinical needs are in Australia. by having gov demonstrate Australia as a strong future marketplace. by establishing fair and transparent processes to IIT engagement.
	Drug access and financial support.
	Communication, provision of medicines in a controlled fashion like Phase 4 trials or access programs. think of ways to value add rather than expensive co pay programs
Consumer	- invest in education for upcoming graduates to have a dual medical and business background
	- be transparent and not take advantage of patient data sharing
	- use marketing and PR resources to promote clinical trial research
	By supporting trials on rare diseases, even if potential profit margin is small.
	Registry data held by company is limited in its ability to contribute to knowledge building in the RD sector. Invest in more transparent Centres of Excellence and non-pharma run registries
CQR	Educating ethics/rgos regarding the nature of these trials. It is important to n
Industry	Provide intellectual collaboration
	Open to ongoing dialogue to understand pain points and how to facilitate clinical research in Australian institutions.
	Provide focus and clarity around industry objectives to ensure alignment between all parties with the patient at the centre
	Align with Industry strategic areas of interest if funding needed. supports both ways
	Open dialogue and collaboration on how to place the right trials at the right centres to benefit our patients - knowledge sharing/resources - focus on shared goal
	Provide clarity on industry sponsor research, disease area strategy. Education on pathways and process for research proposal submission & approval

Sector	Responses - *How can industry further support investigator-led and registry data-informed clinical trials sectors?*
	By looking for opportunities to work together, particularly in disease registries, to enhance the available data for further research purposes.
	By looking for opportunities to work together, including with government, on technology infrastructure for support of registries and data linkage
	Consider more meetings of this nature to help understand and address some of the challenges around industry support of investigator-led research (as noted above)
	Funding, drug supply
	Industry in many cases would like to work with current registry databases. At times there are undue restrictions based, and difficult to collaborate and agree how the data is begin collected and collated. I believe there is plenty of opportunity in this space how to improve these collaborative efforts. Further to this, the registry themselves need to ensure self-funding models are being investigated to reduce reliance on sponsor funding
Jurisdictional Health Department	Provision of proprietary tools so that data could be used in regulatory applications
	Lobby Federal and local Governments to put in more funding for this. I cannot get a look in for data when it comes to trials. Everyone is so focused on just the patient level or access to hospital level that my research falls to the bottom.
	(1) Provide training opportunities for clinical trial personnel. (2) Form ongoing collaborative arrangements with investigator-led / data-informed clinical trials partners for sharing knowledge and building capacity.
	By providing a funding source to support the administration of such registries
	Investment into processes which would provide long term returns
	Expertise to help codesign best practices and develop trials processes, education, and training
	Unsure
Other	Co-funding, collaboration, agreed quality standards and shared use, and shared benefit
	We should support each other. Share information.
Trial Site	CRO's or sponsors offering discounted monitoring fees which will ensure there is data integrity in our IIT's.

16 Appendix I: Survey Responses - Training and development

Sector	Responses - *What do you consider to be the key workforce training and development needs to best support this partnership?*
Academic	Existing work arrangements'
	Mentorship in approaches, understanding processes, COI,
	I don't think this is first and foremost what better partnership needs.
	Co-design leadership training project management media
	Research and clinical trial methodology, project management
	The development of career development pathways for individuals to build a robust workforce with understanding across sectors
	CTM at coordinating centres and at the site level
	Maybe focused on education regarding how each sector works, their demands and their requirements to do business. There needs to be recognition of the people collecting the data need and what their requirements are. Stories I hear are not so much on the competency of staff employed to support trials but the lack of time to meet extremely demanding funders and/or under-funded investigator-initiated trials that then have a flow on effect to the capacity for trials units and networks. There is potential for efficiencies to be found but this requires pump-priming to get over the investment cost before the savings can be realised.
	Supporting a broader range of clinicians (and hence patients) to be engaged in clinical trials. It is seen (by many clinicians) as cumbersome, too specialised and costly in terms of time and commitment. And, not widely supported in healthcare delivery - which is to say it is not seen as part of "core business".
	Not sure
	Apologies I don't fully understand this question. do not believe it is industry role to educate the health sector workforce, this is gov responsibility to ensure national training and development for Australia's health and research sector workforce
	Education on regulatory requirements for clinical trial network staff.
	Liaison staff reduce red tape maybe even pay for medicines at cut price
Consumer	- prioritising the inclusion of more ethnical and racial minorities in clinical trial patient recruitment. - combined business and medical degrees - more reports and journals with minimal scientific jargon about upcoming clinical trial opportunities
	No comment
	Important to ensure that the 'patient/ consumer' is central to these partnerships - needs to be a 3-way partnership
CQR	Stakeholder analysis tools and educational courses (data/statistical/trial methodology, etc.)
Industry	NIL
	Clinical research experience and an understanding of the importance of timely completion as delays

Sector	Responses - *What do you consider to be the key workforce training and development needs to best support this partnership?*
	impact budgets and ability to fund
	Honesty between all parties
	I think each company will have specific controls in place, but it is always good to know that locally it may be supported but at a global level it may be rejected or declined
	Suggest a baseline assessment is completed to best understand this. Understanding of each other's priorities, challenges, opportunities, differences and needs is important so we can align and work together. An open culture with feedback mechanisms needs to be established to allow effective collaboration. Agreement on where we can work together to add the best value and expectations around this.
	Project management, communication & collaboration
	Identifying and understanding the common goals and purpose of the partnership. Likewise, identifying and understanding the common challenges and ways that they can be overcome or mitigated, including industry being more upfront with sponsors on obligations for reporting both during and after study completion and what they would like to achieve from the research, or what their expectations are in return for the financial support. Creating appropriate forums, with appropriate Code of Conduct and governance, for facilitating discussions for enhancing partnership.
	Gold standard GCP
	Understand the governance and laws around these partnerships.
Jurisdictional Health Department	Cross over placements
	In my jurisdiction it's the basics! Understanding GPC, what the NHMRC guidelines mean, how to use national programs like SEBS and NMA to reduce effort, the difference between QI, LHN and high-risk research. We also need stability in research nurses and this NEEDS to be seen as a career path and not just something that you do because you no longer want to do ward work.
	Professionalise and better support clinical trial roles, which will allow personnel to move seamlessly between trials that are investigator-, industry- or co-sponsored. This could include project management, trial design/methodology, sponsor engagement / relationship management.
	The administration of the engagement has a significant cost implication. Without good administration any initiative to support workforce training and development will not be sustainable. The clinician researcher workforce needs to understand what the driving forces for Industry are to engage - know how to pitch and provide evidence of capacity and capability - based on data. Knowing how to manage effective collaboration that is beyond key opinion leaders.
	Protected time Appropriate developmental pathways Appropriate mentorship and targeted training based on specific needs and capabilities
	Budget and contracts, GCP, other standard clinical trials training
Other	CTC and CTA training; retraining schemes and internships
	The sector needs a strong and professional workforce. We need standards that are consistent across all trials so we can provide equitable quality trials to all patients

Sector	Responses - *What do you consider to be the key workforce training and development needs to best support this partnership?*
Trial Site	Essentially what I mentioned on the previous page re site sponsor framework. Sites having a robust sponsor framework will improve the quality of our investigator led studies. Clear roles and responsibilities for sites on who does what - CE, RGO, CTU Manager, PI, medical monitor, CRA, CRC etc. Further having sites network together and act as DSMB or medical monitors for each other to ensure there is independency from the sponsor. Having standard proformas for source, privacy education for all researchers, ICH-GCP education that is accessible, EDC support and management. Also, sites need to build robust data sources to record metrics etc.

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