



## Health care innovation: Working with General Practitioners

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### REVIEW

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### Abstract

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The development of innovations for clinical practice warrants active engagement of clinicians in the research process. This requires attention to factors that serve as incentive to participate. The explanation for the success of factors that encourage practitioners to participate in research can be found in sources of satisfaction and dissatisfaction with clinical practice. It is also important to consider intrinsic incentives such as common and troublesome clinical presentations that are related to workload or unsatisfactory clinical encounters. This review will consider each of these factors and suggest ways in which clinicians, especially general practitioners, may be invited to assist on research projects.

#### Key Words

Research, general practice, innovation, workload.

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Development of health innovations destined for clinical practice requires the perspective and cooperation of end users. Participation in research includes the following:

1. Design of study.
2. Development of an intervention or innovation.
3. Recruitment of patients.
4. Collection of data.
5. Analysis of data.
6. Presentation and or publication of results.

Access to subjects in clinical settings makes it vital to forge partnerships with clinicians. But, why should clinicians participate in research? A practitioner's motivation to perform an activity depends upon the expected benefits from engaging in that activity as well as on the intensity of her preferences for these benefits.<sup>1</sup> Benefits contingent on individuals' effort or performance have been described as 'incentives'. Individuals' preferences for such work benefits are 'motives'.<sup>1</sup> Extrinsic incentives in primary care include remuneration, publication, and publicity.

#### Remuneration

Financial remuneration is a tangible reward for participating in research. Within the context of general practice, a General Practitioner's (GPs) earnings in a country like Australia are dependent on the rate charged for the consultation and, for those without ownership in the practice, a percentage of gross billing. As an example a GP consulting 30 patients per day at \$55 with a 60 per cent gross billing rate will earn \$990 per 7.5 hour shift before tax or \$132 based on an hourly rate.<sup>2</sup> In most primary care systems modelled on fee for service payment structures, doctors are financially disadvantaged when engaged in 'research'; the activity is not billable. Sums close to an hourly rate mentioned above are seldom offered for university-led research projects thus doctors rarely cite remuneration as an incentive for involvement in research. Is this because remuneration is not an incentive or that the sum of money offered is an insufficient motive for participation?

#### Money as a motive for participation in research

The pharmaceutical industry has taken an effective and pragmatic view on the involvement of clinical practitioners in their projects, including generous funding for practitioner involvement in clinical trials. Testimony to the success of the industry approach are reflected by the number of private practitioners who participate in such 'research'.<sup>3</sup> Arguably, some pharma research does not necessarily advance the cause of 'science' as much as the potential for profits of those developing 'me too'



drugs.<sup>4</sup> In a 2004 nationwide survey of 431 practicing US physicians, it was reported that 13 per cent of all practicing physicians were then involved with at least one pharmaceutical study and 33 per cent had conducted studies for the pharmaceutical industry at some point during their careers.<sup>3</sup> The industry's view of primary care was summarised in a critique of pharmacy-led research in the UK:<sup>5</sup>

*"...the 'system' of primary care...was seen as a means of increasing the feasibility of UK clinical research, particularly alongside infrastructure investment in information technology and electronic patient records. ... primary care was positioned as an economic and marketing resource, facilitating the recruitment of patients to clinical trials within the new infrastructure" (pg.2514).*

### Publication

A recent review suggested that seventy-five per cent of GPs who published academic papers had specific time assigned to research, on average 13 hours per week; 79 per cent were affiliated with a university and 69 per cent held teaching positions.<sup>6</sup> Therefore, either publication is a powerful incentive for those whose prospects are determined by their research efforts, largely university employees, or clinicians are neither skilled at, nor motivated to write for publication. A recent report suggested that publication declines in value if there is a decreasing emphasis on research as part of training.<sup>7</sup> During training for general practice research plays a minor role. The incentives to publish including enhanced prospects for promotion and competitive grant success do not apply. The possibility of authorship to promote participation raises the spectre of the dubious ethics of 'gift' authorship, namely citing a participant as an author who does not satisfy the internationally accepted criteria for authorship.<sup>8,9</sup>

### Publicity

Press interviews for local or national news channels or invitations to conferences and other forums may be considered a reward for participating in successful research. Clinicians are unlikely to differ from the general public where public speaking is an activity most individuals dislike, fear, or avoid.<sup>10</sup> While speaking in public might not be an incentive, it is possible that positive publicity about the practice and its staff is more of a motivation. This can be achieved by way of acknowledgement on a research paper. However, offers of acknowledgement are unlikely to play a significant part in swaying the decision to participate in research. To the author's knowledge, scant data exist on the value of acknowledgement in footnotes as an effective aid to forging collaborations with clinicians.

### Intrinsic factors

Thus far, there has been a focus on extrinsic incentives—benefits that are conferred by an external agency such as a funding organisation, lead researcher or body of peers. What about intrinsic incentives that reflect an interaction between the work required to participate in research and the practitioner?<sup>1</sup> Intrinsic benefits, unlike extrinsic benefits, are subjective and do not exist independently from a reference individual.<sup>1</sup>

The nature of the input required for practitioners to participate in research is of particular relevance. The effort required to participate is a function of both the size of the reward (e.g., remuneration) and the intensity of the individual's preference for that reward.<sup>1</sup> The effort involved in the recruitment of a patient to a study might, in some cases, be far less onerous than the input required for development of an intervention de novo. The effort required to delegate to a practice manager is even less of an impost. 'Effort' is multidimensional and a given task can be characterised by effort in different activities or by the intensity or quality of cognitive effort.

A practitioner's motives may shape their response to intermediate activities such as a response to an invitation and scheduling of meetings to discuss details with a sponsoring organisation. These factors may in turn impact the success of the collaboration with the clinician. There are many potentially mediating activities and each could be related in different ways to the clinician's motives. For example, a clinician's preference for intellectual challenge may drive her to select more challenging and thus potentially more technologically significant projects. Individuals with stronger motives or those presented with stronger incentives are likely to approach a given project with a higher degree of cognitive effort.<sup>1</sup>

GPs are time poor and derive much of their satisfaction from the interaction between the doctor and the patient.<sup>11</sup> Therefore, a focus on the problems or issues routinely seen in practice and those perhaps less than satisfying to manage are of particular relevance as incentives to participate. Some psychologists suggest that extrinsic incentives, such as remuneration, may enhance creativity if the rewards are tied explicitly to the novelty and creativity of the project.<sup>1</sup> Examples of potential themes that have resonance with clinicians are outlined below.

### Common problems

Acute self-limiting illness is a significant part of daily workload in clinical practice.<sup>12</sup> This includes viral

infections such as flu-like respiratory illness and skin lesions resulting from Human Papilloma Virus infections such as that illustrated in Figure 1. Both are difficult to treat and may result in unsatisfactory and difficult consultations.<sup>13-15</sup> Patients with viral respiratory tract infections may insist on prescriptions for antibiotics and enter into conflict with the doctor.<sup>16</sup> Projects aimed at the reduction of pressure to prescribe antibiotics or an offer of more effective treatment for common and recalcitrant conditions may be excellent intrinsic incentives in clinical practice. Such innovations could include point-of-care tests to confirm viral infection or develop painless and effective treatments for skin lesions.

**Figure 1: Plantar wart --- difficult to treat.**



### Old tools

The stethoscope is routinely used in medical practice. It is a much loved 'tool of the trade', even regarded as an icon of the profession, see Figure 2.<sup>17</sup> However, it has been noted that most GPs in many countries are over the age of 45 years and might find high frequency chest sounds more difficult to hear due to age-related factors.<sup>18</sup> Projects that aim to maximise the users' auditory acuity may be of particular interest.

**Figure 2: Enhancing the value of existing instruments**



### New tools

Clinicians have become increasingly dependent on diagnostic

tests.<sup>19,20</sup> The development of new tests that can assist practitioners to make an objective assessment of a patient with a challenging diagnosis one that supports earlier diagnosis of a treatable life-limiting condition have particular relevance.<sup>21</sup> As well, medico-legal issues continue to be a major source of stress and dissatisfaction for clinicians; a key cause of complaints against GPs is the failure to make a diagnosis.<sup>22</sup> Tool development aimed at the reduction of patient dissatisfaction and associated risks are likely to be incentives to participate.<sup>23</sup>

### Difficult and chronic problems

Within the next two decades, the majority of the populations of developed countries will be overweight or obese<sup>24</sup> with proportionally linear incidences of chronic and complex conditions.<sup>25</sup> Tackling obesity in primary care is a major challenge for which there appears to be no effective strategy.<sup>26</sup> New tools are required to assist clinicians to motivate and support patients with effective treatments for obesity, including adherence to calorie restriction, exercise regimens and other health promotion strategies.<sup>27</sup>

### Skills

Every element of the research process requires a specific skill set. Librarians, data managers, project coordinators, statisticians, economists, technicians, copy editors and public speakers all have a role to play. It might be important to ensure that the clinician is encouraged to focus on project aspects that require their clinical perspective. Activity that adds to paperwork and workload, regardless of extrinsic incentives, is likely to diminish interest in a project. Researchers must offer a clear agreement about expectations, including explicit documentation about inclusive and exclusive activities such as authorship and participation in commercialisation, if relevant. The latter incentives are likely to appeal only to the minority.

### Access to practitioners

Gaining access to practitioners remains a particular challenge for many innovators, especially those who are not affiliated with a medical school. Much depends on local networks and the ability to disseminate information and market research projects effectively. For those leading innovations, it is important to invest in the infrastructure to serve clinical partners, including informing, supporting, advising participants, collecting data and administering any promised incentives in a timely fashion.

### Pitching to practitioners



It is imperative that any opportunity to pitch effectively markets research to practitioners. The elements of an effective pitch are the same as those deployed in marketing to any other customer. Much can be learned from those who need to pitch regularly and effectively for the survival of their business. The film industry is a good case in point. Film makers have been advised as follows:<sup>28</sup>

1. *If the pitch is not delivered with passion, it will not be received with enthusiasm.*
2. *The first order of business is to present the genre.*
3. *To avoid the possible pitfalls of question/answer, a pitch can simply ask a rhetorical question or make a statement that will produce similar effects.*
4. *After creating a desire in the listener, the pitch must present the screenplay's rudimentary storyline. The listener must understand the arithmetic of the story before the calculus.*
5. *The pitch must proceed along a simplistic route, covering the major narrative conflicts and taking the story to its conclusion. With a clear understanding of the story's beginning, middle and end, a larger box can be opened by colouring the pitch with a few details.*
6. *Throughout the pitch, it is imperative that the presentation not go off on tangents. If the pitch wants to offer background information, it should be done in an introduction, before presenting the log line, and handled with the utmost clarity and brevity.*
7. *Use visual aids to provide greater comprehension to the listener. It is imperative to remember, "Less is more." Trying to playfully bait the executive with, "You'll have to read the rest," is not an effective way to deal with a person who already has a stack of screenplays on his desk.*
8. *A pitch can go splendidly but still fail in its objective to entice the listener, because the story may not be shopped by the producer. With an organized and controlled presentation --- prepared and practiced in advance --- a writer can succeed at convincing a busy agent or producer to invest the time into reading yet another screenplay.*

Despite it all, innovators cannot count on engagement by all clinicians even if the intrinsic and extrinsic incentives appear to be compelling and the team make an excellent pitch. Research on factors that lead to active innovation has concluded that no incentive will work on every occasion.<sup>1</sup> It is also true of practitioners that they too can be divided into innovators and early adopters, and similarly those who are likely to engage in innovation are in the minority.<sup>29</sup>

## Conclusions

Involvement of practitioners on research projects can be maximised through the facilitation of extrinsic incentives such as realistic recompense for time commitment and intrinsic incentives including a focus on topics of significant relevance to the clinical setting. To maintain a responsive network of clinicians it is paramount to deploy support staff with consistent promise delivery. Pitching a research project to a time poor clinician already maximally engaged in remunerated work warrants clarity, brevity and practice. The skill required of innovators who are keen to work with general practitioners is the capacity to turn their incentives (likes) into motives (wants) to participate. On the other hand, it is likely that only a minority of practitioners are ever going to engage in research to any extent and some of the above may prove helpful.

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#### PEER REVIEW

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#### CONFLICTS OF INTEREST

The author declares that there are no competing interests.