Using practical wisdom to facilitate ethical decision-making: a major empirical study of *phronesis* in the decision narratives of doctors

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Research article

Keywords: phronesis, practical wisdom, practice virtue ethics, decision-making, clinical leadership, Neo-Aristotelean

Posted Date: September 3rd, 2020

DOI: https://doi.org/10.21203/rs.3.rs-11289/v1

Version of Record: A version of this preprint was published at BMC Medical Ethics on February 18th, 2021. See the published version at https://doi.org/10.1186/s12910-021-00581-y.

Abstract

Background

Medical ethics has recently seen a drive away from multiple prescriptive approaches, where physicians are inundated with guidelines and principles, towards alternative, less deontological perspectives. This represents a clear call for theory building that does not produce more guidelines. *Phronesis* (practical wisdom) offers an alternative approach for ethical decision-making based on an application of accumulated wisdom gained through previous practice dilemmas and decisions experienced by practitioners. *Phronesis,* sometimes referred to as the 'executive virtue', offers a way to navigate the practice virtues for any given case to reach a final decision on the way forward. However, very limited empirical data exist to support the theory of *phronesis* -based medical decision-making, and what does exist tends to focus on individual practitioners rather than practice-based communities of physicians.

Methods

The primary research question was: What does it mean to medical practitioners to make ethically wise decisions for patients and their communities? A three-year ethnographic study explored the practical wisdom of doctors (n=131) and used their narratives to develop theoretical understanding of the concepts of ethical decision-making. Data collection included narrative interviews and observations with hospital doctors and General Practitioners at all stages in career progression. The analysis draws on neo-Aristotelian and MacIntyrean concepts of practice- based virtue ethics and was supported by an arts-based film production process.

Findings

We found that individually doctors conveyed many different practice virtues and those were consolidated into fifteen virtue continua that convey the participants' collective practical wisdom, including the *phronesis* virtue. This study advances the existing theory on *phronesis* as a decision-making approach because only now a theoretical 'collective practical wisdom' exists.

Conclusion

Given the arguments that doctors feel professionally and personally vulnerable in the context of ethical decision-making, our contribution in the form of a moral debating resource can support before, during and after decision-making reflection. The potential implications are that these theoretical findings can be used by educators and practitioners as a non-prescriptive alternative to improve ethical decision-making, thereby addressing the call in the literature, and benefit patients and their communities, as well.

Background

The health and well-being of people in low, middle and high income countries is dependent on medical and public health decision-making. In recent years, there have been calls for the use of *phronesis* (practical wisdom) for medical-related ethical decision-making as a complement to evidence-based practice [1]. This is because the latter does not take into account the particularities of any given case and context.

Although Gallagher et al [2] argue that doctors are motivated primarily by deontological approaches to decision-making in the context of medical practice, the quantity of such guidelines means that the deontological approach has become unmanageable. One estimate suggests that there may be more than 7000 deontological guidelines for clinicians to follow, with many being added every year[3]. The abstractness of principle-based approaches raises concerns about their utility in complex clinical context and decision-making [4, 5]. Further Torjuul et al [6] suggest that meeting the expectations of patients, colleagues and society makes doctors professionally and personally vulnerable. For instance, although the practitioners' main concern are their patients, in an environment of resource and regulatory constraints, meeting patients' expectations and distributing health care is challenging [6]. We argue that the theory offered in this paper offers a partial 'antidote' that makes the process of ethical decision-making easier, potentially reducing feelings of vulnerability and can build physician resilience.

In this paper, we describe fifteen virtues that offer novel insights into the social and psychological processes at play in making ethically wise decisions. Together, they create opportunities for doctors' virtues to be better understood and for employing the fifteen as 'collective wisdom' to support improved ethical decision-making. Overall, our research responds to the call for overcoming the limitations of the dominant deontological evidence-based approach and meets the need for a new approach with a conceptual framework used as a moral debating resource for cultivating *phronesis* (practical wisdom) in the process of making ethical decisions.

Phronesis is a conceptual approach to ethical decision-making grounded in an accumulated wisdom gained through previous practice dilemmas and decisions. Practical wisdom is a way for healthcare professionals to take account of virtues relevant to the dilemma under consideration and lead to wise decisions that bring about the best outcomes for individual patients and their communities. As an instrument for making practically wise decisions, *phronesis* is important when conducting research [7] and making decisions [1]. In effect, *phronesis* is an "executive virtue" that keeps stakeholders central to the decision-making process, allowing ethical choices to be executed in practice [8] .

In their account of ethical decision-making, Jonsen et al. [9] report that the fundamental difficulty in all clinical settings is uncertainty. They note that the biological side of the uncertainty problem is severe because it is often very hard to be sure of a diagnosis or be certain that a specific treatment will work. Additional layers of uncertainty compound this situation, further. For instance: What do patients prefer? Do they value length or quality of life? Do they prefer treatment (or no treatment) in line with particular religious or moral beliefs? Moreover, understanding the views of interested parties is essential: Does the patient's family have particular wishes? Does the hospital or health system have certain priorities of what can and cannot be treated due to financial constraints? Regardless of such preferences, what is the right or wrong thing to do? What if patients, relatives and hospitals prefer courses of treatment (such as antibiotics) that are not in the collective interest of the community to give?

When different moral and social problems begin to interact with each another, medical decision-makers may be uncertain about what is best for particular patients and society, and how best to achieve optimal outcomes for both, simultaneously. Decision-makers must choose what is in the best interest of patients and society is in line with good clinical practice and has a good chance of working in practice.

Drawing on Toulmin [10], Beresford argues that the "preoccupation with theoretical concerns, and with the justification and application of general moral principles, which had characterized medical ethics prior to its engagement with the issues arising from modern medical practice had only led to insurmountable disagreements and interminable conflict" [11:210]. Beresford suggests that Toulmin [10] and MacIntyre [12] align with each other in arguing for a recovery of the virtues of practical judgement to overcome these disagreements and conflicts in the form of Aristotle's *phronesis* [11].

Building on Jonsen and Toulmin [13] a number of authors [14-18] have developed theoretical accounts of judgement in medicine based on Aristotle's account of *phronesis* being the kind of practical wisdom that is needed to promote the good in morally difficult situations.

Pellegrino and Thomasma [14] provide the most forceful defence of the virtue-theoretic approach to medical ethics. They write that rules, or principles, based approaches to medical ethics are "too abstract" and "too formularized and far removed from the concrete human particulars of moral choice" [14:19]. In their alternative conception, *phronesis* plays a crucial part in being medicine's "indispensable virtue" because it provides an essential connection between seeing or understanding what is right or good and knowing how to do good [14:84].

In Aristotle's work, *phronesis* is the intellectual virtue that helps turn one's moral instincts into practical moral action [19]. Because different virtues can pull doctors in different directions (e.g. compassion drives her to give an optimistic assessment to a patient and honesty drives her to tell the truth), *phronesis* is required to chart the right course between competing motivations. *Phronesis* helps put virtues in the "proper order of priority and to make the right and good decision in the most difficult situation" [20:382]. In the people professions finding solutions to particular challenges by diverging from mechanical "means-ends" reasoning and the "clutches of a stale rule-and-code touting formalism and a culture of mere compliance" to focus on *phronesis* is helpful [21:300, 22].

Montgomery [16], Kaldjian [15] and Toon [17] offer book-length studies arguing that *phronesis* plays an important role in medical decision-making. Although there has been a drive to theorise about the importance of empirically-informed ethics [23-25], including *phronesis* [26], attempts to study clinical-judgement as *phronesis* using empirical data are rare [27]. Notable exceptions are Jordens and Little [28], Little *et al.* [29], Jones et al [30] and Conroy et al [31]. However, all of these studies have been limited by small sample sizes. Currently a clear gap exists for a large empirical study to inform the development of a *phronetic* approach to medical and public health decision making.

The concept of *phronesis* helps decision-makers to find ways through the whole range of practice virtues relevant to specific case and informs ethical decision-making. In our analysis, we use *phronesis* as a theoretical frame to analyse the narratives and the observations on medical decisions that our participants conveyed both as wise and not so wise for patients and their community. Being within the virtue ethics theoretical framework, *phronesis* offers a way of formulating decisions that promote well-being for all in society.

When medical leaders or practitioners make decisions by drawing on collective practical wisdom from many existing knowledge of practice sources, cases and contexts then according to MacIntyre [12] their decisions will be ethically wise. Hence, there is a need first to understand the virtues that are considered by communities of practitioners (at all stages of their careers) to be important for their practice. To understand all the virtues at play

for any particular medical practice, real cases communicated through stories or narratives offer the best approach to eliciting the appropriate virtues [16]. The ontology of narrative conveying and transmitting virtues is supported by MacIntyre (1981). In response, we started our research with the following questions:

1. What does it mean to the medical community to make ethically wise decisions?
2. What virtues do the medical community convey as important for decision-making?
3. What approach do medical practitioners use to navigate the virtues they consider important when making decisions?

In this article, we present the findings from a three-year study, '*Phronesis* and the Medical Community' (PMC), which used a narrative and arts based methodology to understand what it means to a community of UK medical practitioners to make ethically wise decisions for patients and their communities. Following Kaldjian [15]and MacIntyre [12], we critically examine data from the three questions listed above, with particular attention to virtues being used as moral debating resources to make decisions based upon a collective practical wisdom. This paper describes the methodology, summarises our findings, discusses their contribution to medical decision-making and suggests implications for medical education, policy and research internationally.

Methods

Our research methods are based upon three main sources. From the humanities, we draw on the practice virtues philosophy of MacIntyre [12] and his argument that practitioner narratives convey the virtues of the practice of interest: narratives "humanize" situations and convey "what matters to us" [32, 33]. From social sciences, we use Flyvbjerg et al.'s [34] *phronesis*-based ethnography to support the contextualisation of the collected stories. From the arts, we draw on a participatory video production approach [35]. The PMC study was conducted during the calendar years 2015–18 and examines what ethically wise decision-making means to the medical profession and elicits narratives from both formal education and practice environments.

Our sources of data were in-depth, semi-structured interviews and direct observation of medical decision-making forums. This approach allowed us to collect narratives and contexts, which indicated what participants considered to be ethically wise decisions and those which they considered to be unwise for their patients and communities. Our methods and data sources are appropriate to answering our three research questions and build on those used in other studies with an interest of understanding practice virtues [e.g 36].

Data Collection

Three communities of doctors were interviewed (by MC, AM, CW, CH, AB and CT) from mid-2015 to early 2017. Interviews took place during three time periods:

1. Beginning of formal medical study (2nd year) and end of formal medical study (5^{th}/final year)
2. On placement at the end of formal study (FY 1 and FY2) and then in GP or Consultant traineeship.
3. Established GPs and medical consultants with 5 years or more experience.

Ethics approval was obtained from the partnering Universities (Birmingham, Warwick and Nottingham), the Ministry of Defence Research Ethics Committee and the Health Research Authority. Eligible doctors and medical students were identified with the help of the academic and administration co-ordinators at the three participating

medical schools and their local NHS Trust hospitals. Thereafter, using a snowball sampling technique, more doctors were approached and invited to participate via emails. All communications between interested potential participants and researchers was treated as confidential. Emails did not reveal who else was contacted. All medical students, foundation year (FY) doctors and experienced doctors who were interviewed were asked if they would consent to observations. Observations were carried out from August 2017 to November 2017.

The foundation year cohort was interviewed twice to understand to what extent their *phronesis* develops as they move from FY1 to FY2. Some experienced practitioners were also observed when they were working with multidisciplinary teams or peer groups to make decisions for their patients.

Participants were sent participant information sheets. Those who consented were invited for an interview. The interviews were initially lightly structured, starting by explaining that we were interested in exploring: (i) the participant's experience of involvement in making ethical/wise decisions; (ii) whether their own or those of others they work with; (iii) whether they perceived them to be good/wise or not so good/unwise decisions. A total of 131 participants were interviewed. The interviews were audio–recorded and transcribed verbatim. Four foundation year participants and two experienced doctors from across the three sites provided a diary focusing on experiences of meaningfulness and puzzlement that they felt represented practical wisdom (wise or unwise decisions).

Once collected, the stories and ethnographic contexts were fed back to some of the doctors to ensure they were a fair and balanced representation of the kind of stories that circulate in their practice environment. Subsequently, these narratives were used to generate discussion and provided the basis for storyboards and scripts that led to the production of a series of video films.

Data Analysis

In our research, virtue ethics was used as the theoretical frame with the aim of understanding medical decision-making from that perspective. *Phronesis* is one of the virtues in that conceptual frame originally put forward by Aristotle [19] as a character-based theory. Aristotle's work was later developed by MacIntyre [12] and others into a neo-Aristotelian schema of practice virtues with shared purpose or common good for any practice. We applied the latter form of practice virtue ethics to analyse the data collected in this study.

Interview data were analysed thematically by reading and rereading the transcripts to make the transition from literal meaning to virtue themes. Coding was conducted in NVivo 11 Plus. Coding and analysis were conducted simultaneously. Coders (MC, AM, CW, CH and AB) met regularly, initially to discuss coding strategies and categories and then to "check" (inter-coder reliability) and to consolidate virtue themes.

After four iterations, a set of 15 virtues were agreed. These 15 virtues were put into virtue continua (Table 1). This consolidated set of virtues was used as the basis of the video series and theoretical analysis. The nature of *phronesis* identified in our research was examined through two theoretical lenses: MacIntyre's [12] practice based virtue ethics and Kaldjian's [37] medical phronesis. Findings from the latter are presented elsewhere [38].

Our use of narrative combined with film production methodology enabled MacIntyre's practice virtue ethics to emerge from our data as an ethical framework for medical decision-making that reflects doctors' ideas of how their decisions contribute to the good for patients and their communities and how their decision-making may be

performed ethically. The close fit between our data and practice virtue ethics including *phronesis* suggests that our findings are a valid resource for doctors to use in moral debates at all stages in their professional careers. Practitioners may find value in our approach as an aid to ethical reflection about their decision-making, as a guide to ethical action, and as a foundation for resolving discrepancies between values and virtues.

Findings

Participants conveyed many different practice virtues but no one participant conveyed all 15 virtues. As could be expected, the more experienced participants conveyed more of the virtues than the less experienced participants. This finding connects to the neo-Aristotelian framework of practice virtues constructed by MacIntyre (1981) and advocated by Carr [39]. MacIntyre suggests his approach across the peer group of practitioners rather than individual moral characters. This fits with the notion of diversity in practitioner contributions bringing a more robust set of virtues to the practice [39, 40]. The consolidated fifteen virtues we present here represent a “starter-set” of virtues for medical practice that are open for debate and challenge from others. As a non-prescriptive debating resource, this combined *phronesis* offers a powerful way for those in medical education and practice to debate their decision-making to serve the best interest of patients and their communities. The arts-based element of the analysis produced a seven-part video series, which is an enacted form of our participants’ ”Collective Practical Wisdom”. The videos offer a highly accessible form of moral debating resource for reflection before, during and after medical decision-making.

We present our findings as a “virtue continua” (Table 1) and as virtues per cohort (Table 2) before presenting them in text form. Due to space constraints, not all 15 virtues are presented as text. Virtues such as negotiate/or, cultural competence, seeking guidance and interpersonal communication were conveyed by a large proportion of our participants and are presented as text examples. The other virtue that is presented is *Phronesis*.

Virtue Continuum

The virtue continua table (Table 1) shows the virtues conveyed by our interviewees in their narratives. Each virtue extends from pole-to-pole via a mean.

Table 1: Virtue Continua

Virtue (V.)	*POLE1(excess)*	*MEAN*	*POLE2 (deficiency)*
1	*Doctor decides*	*Negotiates*	*Patient decides*
2	*ALL get treatment*	*Just/Fair*	*Select few get treated*
3	*Overly trusted*	*Trust/Integrity/ Confidentiality*	*No trust*
4	*Constant litigation worry*	*Lawful*	*Ignore legal constraints*
5	*Constantly seeks Guidance from peers and/or professional bodies.*	*Making Collaborative Decisions/ Seek guidance*	*Self –guided / Does not consult*
6	*Use own values and beliefs*	*Culturally competent*	*Go with patient's values and beliefs only*
7	*Too involved Over emotional*	*Interpersonal Communication (including:Emotional intelligence)*	*Distant / Aloof*

8	*Treat at all cost*	*Recognising limits to treatments*	*Limited consideration of treatment options*
9	*Constant mentoring / overly directive.*	*Approachable / available mentor*	*No interest in mentorship*
10	*Trying to cater to all aspects – Arts / humanities science, spiritual and physical.*	*Balanced approach*	*Just one approach - e.g. science/clinical only*
11	*Over-analytical (Navel gazing)*	*Reflective*	*Never reflect*
12	*Foolhardy risk taker*	*Courage to speak out have difficult conversations*	*Avoids conflict*
13	*Thinking they are bullet proof*	*Resilience*	*Avoidance of any stress*
14	*Obsessed with finances / resources*	*Resource awareness*	*No consideration of finite resources*
15	*Seen it all / know it all*	*Phronesis*	*Applies purely theory or just follows guidelines*

can deal with anything

Virtues per cohort

- The virtue per cohort table (Table 2) was produced by cross tabulating the 15 virtues by cohort in order to show whether the virtues are practiced by one, two or all cohorts. There are virtues that transcend boundaries between studentship and qualified practitioners as shown in Table 2. These virtues are: Negotiate with patients/carers while 'doctor decides' or 'patient decides' are at the polar ends (Virtue1);
- Seeks guidance/Make collaborative decisions at the mean, with 'constantly seeks guidance from peers and/or professional bodies' and 'self-guided/does not consult' are the extreme positions and hence a vice (Virtue 5);
- Culturally competent is at the mean, while 'only using own values and beliefs' and/or 'only going with patient's values and beliefs' are the extreme positions (Virtue 6);
- Interpersonal communication/Being emotionally intelligent is at the mean, as opposed to 'being too involved/over emotional' or 'being distant/aloof' (Virtue 7).

Table 2: Virtues per cohort

Cohort	V.1	V.2	V.3	V.4	V.5	V.6	V.7	V.8	V.9	V.10	V.11	V.12	V.13	V.14	V.15
2nd yr.	13	7	8	1	11	8	16	7	7	3	3	6	1	3	5
5th yr.	11	4	8	6	3	13	15	2	5	5	3	11	4	6	9
FY 1	11	5	4	5	17	8	12	8	7	6	10	5	3	3	7
FY 2	8	3	1	8	16	3	12	9	11	11	2	9	5	8	8
Exp. (includes trainees)	22	7	8	10	22	15	14	15	11	14	15	4	14	15	20

The table also shows that the virtues like lawfulness (V.4), recognising limits to treatments (V. 8), being an approachable mentor (V.9), being resource aware (V.14) and phronesis (V.15) are more common amongst foundation year and experienced doctors, with some 5th year students narrating experiences of their seniors.

Negotiate (V.1)

Many participants produced narratives about negotiating with patients and others when making decisions about treatment. The doctor's role was conveyed as providing suitable and relevant information to enable patients/carers to come to a decision, as well as providing expert advice and guidance in the light of clinical facts, taking patients' views into account and thereby enabling informed choice in partnership with the patient:

> *"I guess that would be my approach, just to seek out as many facts as I possibly could on the one hand, and for more… difficult decisions, just talking to the patient and trying to get to know them a bit better and their kind of particular outlook ….. and then possibly based on that, kind of guide them to a decision that I think might suit them better." (B102).*

Experienced doctors spoke about the importance of dialogue and how exchanging information resolves conflicts and enables patients to make an informed choice:

> "*a constructive conversation both ways. I've got something to say but let's not jump to a decision now, because that would be wrong." (BX02).*

However, decisiveness was respected both by doctors-in-training and by some patients they encountered. It was felt that some patients implicitly sought paternalistic guidance, as they may find decision-making burdensome, relying on the doctor's expertise and knowledge to guide them:

> "*Sometimes people do respond well actually to someone taking control of the situation, even if it's in a way that you would think would surely be completely inappropriate, but [the patients] respond well to it." (B112)*

Sometimes, some participants considered that persuading patients in their best interest is necessary because:

> *"[A] patient doesn't understand the severity of the decision they're making, and perhaps only when they've seen people who don't have the procedure done or don't have an operation might they learn… the actual nature of the decision they're making, because we see it, whereas they don't." (WX02).*

Led by patient autonomy, sometimes doctors assume the role of information providers, enabling patients' decisions to be implemented:

> *"But, for me, a good decision is one where the patient is the one who essentially makes the decision, or puts forward their wishes, and we then, as the clinicians, allow that decision to come to fruition." (B107)*

Collaborative decisions / seeking guidance (V.5)

Many participants narrated stories about the present-day clinical paradigm being where professionally isolated decision-making is often neither advisable nor possible. Seeking to involve all those entrusted with a particular patient's care allowed holistic, tailored decisions. Counsel from multiple parties and professional guidelines was felt to be valuable. This was corroborated by the project's observations of different MDT meetings. When making decisions for complex cases, team members found that the progressive decisions reached and displayed on the whiteboards were useful, as *"they help prioritise and review decisions." (Obs.1)*

Guidelines, though useful, require contextual awareness that can be provided by those who know the patient well, such as:

"[T]he nursing staff who cared for the patient throughout, I relied on hugely because …and even the night sister … just made it more logical, and decision-making more logical. I do rely on my consultants for the ultimate decision quite a lot of the time." (BX01)

In observation 2, the roles of the occupational therapist (OT), physiotherapist (PT) and speech therapist were seen to be central to certain patients' treatment because they had the most up-to-date information. The registrars and consultant relied on the OT and PT to provide almost the whole information summary. These collaborative discussions become critically important when making "deprivation of liberty" decisions. This observation made it clear that:

"The lead consultant would ask questions and appeared to be kind of taking it all in, cross-referencing information he got with his records on his computer. More often than not, he would defer to the decisions of the PT and OT…..The nurse had a lot of say as well about how patients were progressing towards their goals." (Obs. 2)

This approach was not universal. At another MDT observation (Obs. 3), the discussions were mostly contained amongst the doctors, with barely any input from other staff.

Most medical students were of the view that it is far better for "not-so-experienced doctors" to defer to people with more experience:

"[Y]ou know, bigger decisions, you're not going to want to take that onto yourself, you're going to defer to people that have got the experience." (W203)

Newly trained doctors find it easier (and safer) to seek guidance from, and feel reassured by, more experienced doctors. This was observed (Obs. 3) in an Emergency Department environment, when the junior doctor requested a consultant to discuss "an older patient with complex health and social problems":

"…. they've probably made that before and they can tell you with experience the outcome and why. And they might come up with ideas as to why your idea might not be the best for that patient." (W101)

Experienced doctors also seek guidance in challenging cases. This reduces the cognitive load and help make better decisions:

"…sometimes that consensus is really useful because you're basically going through the arguments … and again clarifying some of the aspects of it, I think." (BX11)

Some participants referred to guidelines being interpreted contextually. This could result in referring to more experienced doctors to gain insights into wider interpretation of the guidelines:

"*…so we've got an SHO ….[with] very good book knowledge, he's very academic, [and] knows the guidelines for everything off by heart but he doesn't really have a grasp of the fact that not every patient can be treated as per guidelines. And we've been trying to explain to him that a guideline is just that, it's a guideline, it's not rigid; it's meant to guide your practice….. he's had real issues with not calling for senior support because he feels that he's got a guideline to follow and that he follows it.." (WX05)*

Culturally competent (V.6)

Some stories conveyed that respecting patients' values and beliefs is important. Many of the participants said that they consult their colleagues to understand cultural issues. However, some participants narrated experiences where the doctor chose to follow their own beliefs and values, rather than their patients'. One doctor experienced a situation where a doctor refused an intervention that challenged their personal beliefs leading to treatment delay. They felt:

> "*it is important* to *park your own values. You should not allow those values to affect the decision." (BX04)*

A 5th Year medical student told of a consultation in a sexual health clinic, where the doctor seemed judgemental towards a patient:

> *" he said something like, 'Are you gay or straight?' or something. Just, like, which is incorrectly phrased? There's far more, like, tactful ways to do it. But he, kind of, shouted at them, so, 'Are you gay?' kind of thing." (B501)*

Cross-cultural sensitivity was seen important in building trust. Rehabilitation, for example, is seen to follow a "white Anglo-Saxon" model. An experienced doctor explained:

> *"The Muslim perspective is a more vitalist perspective in terms of – you can have everything that's possible. Whereas I think there's – generally there's mistrust of the NHS that we pull out too soon, and we don't do everything that's possible,……. don't do everything we should be doing.. but that's compounded by.. a cultural view of life I think….. there is a cultural clash, so there is mistrust that can be on both sides. The only way to get around that is to recognise that there is a difference in view and maintain open dialogue." (BX05)*

Interpersonal communication / Emotional Intelligence (V.7)

Good interpersonal communication was conveyed as commendable by our participants. For example:

> *"you can be the greatest doctor in the world but if you can't communicate, nobody will do what you say, will they?" (BX103).*

Some participants also conveyed that having the clinical knowledge regarding the disease at hand is also essential:

> *"you can be a very compassionate person, but a useless doctor if you don't know what you're doing." (W207),*

Some participants narrated experiences where an apparent lack of interpersonal communication skills was displayed by a doctor:

> *"…the clinician who saw her [the patient] wasn't very communicative and reassuring in his approach to the patient… [the patient] was having a miscarriage, [the clinician] left it at that; left the room, and I was standing there with a very distraught couple… I told the clinician and he said, 'Oh they'll probably figure it out some way along the line'. And wasn't very keen on going back and telling the patient – reassuring them." (W502).*

Some conveyed how empathic communication made patients amenable to discussion:

> *"I think you have to, I suppose, temper your objective, rational facts for your decision-making process in a way that comes across as empathetic and sympathetic and looking at a bigger picture view beyond the*

current situation; and also to help parents to think about things from their baby's view." (BX12).

Phronesis (V.15)

The development of practical wisdom was conveyed by most interviewees as sequentially experiential. One medical student termed it *"learned experience"* (N203), while a foundation year doctor spoke of it as a *"mix of nurture and nature"* (B104, Follow-up). For one experienced doctor:

> *"…some people are inherently wiser, they are really wise people…now, whether that wisdom is inherent or … is simply because that person has walked past that journey ahead of me." (NX05)*

Experience can, however, lead to an assumption about personal knowledge. A foundation year doctor recounted a difficult birth where no pain relief was given to the mother, and the consultant seemed to show a lack of compassion for the mother and focussed on getting the baby out alive:

> *"… experience makes you better at making clinical decisions… but not necessarily in terms of ethical decisions… a lot of people get stuck in their ways." (B504)*

Assuming that they "know it all" and following a textbook approach can cause a doctor to be caught out:

> *"You can't make a decision based on what the textbooks say… because if the textbooks say it, you can only say that that's right 99% of the time. There will always be the one case that will catch you out if you treat everybody the same… there's things that are really rare, but they still happen." (WX02)*

An experienced doctor highlighted another risk that arises with experience and seniority and was "*arrogant or foolhardy." (BX04)*.

Similarly, another experienced doctor reflected on a senior consultant who regularly over-ruled on the basis of experience rather than book knowledge*:*

> *"Because evidence-based medicine tells you something else, but the experience of this doctor was something different, so there* i*s, kind of, a clash between the two, rather than both going forward in a symbiotic relationship…. Which is why I'm wary of saying that wisdom is the most important thing." (NX04)*

Phronesis was variously described as the collation of holistic information, both clinical and social, from different sources, as well as being able to weigh that up against protocols, guidelines, various situations encountered in the past and then getting other *"opinions, other approval, putting the situation to a new pair of eyes, and saying okay this is what I have got here." (B106)*.

But for some medical students, *phronesis* seemed to be narrowly defined as diagnostic skills (i.e. *techne)* as opposed to the broader process of a holistic decision-making (as described by foundation and experienced doctors):

> *"You know you learn by example, by following what someone else is doing… the art and the science of medicine… you need the clinical knowledge and then you need the experience to know how to apply it and when to apply it." (W207)*

Another medical student also spoke of consultants with a *"repertoire of patterns" (W209)*. However, *e*xperience and "time served" were not enough to guarantee wise decision-making, and certain other virtues were seen as key to phronetic decisions. For instance, being reflective, *"open to insight" (WX04)* and being consultative: "*it is always questioning what the right thing to do is." (B110).* There were those who considered it as intuition, *"a sixth sense" (NX02).*

Phronetic decisions were often seen as the avoidance of the rigid application of rules and guidelines, what was termed by one experienced doctor as the *"protocolisation of medicine" (WX03)*. In medicine "*it is this difficulty of managing an illness rather than treatment of an illness which is the more difficult bit and there are never going to be mathematically accurate answers." (WX06)*

A foundation year doctor described a consultant's decision to not "red-card" a drug user found injecting heroin in the hospital toilets, who was due a life-saving operation that day:

> *"the rules were applied but also there was some practical wisdom applied" (B104).*

Phronetic decisions were often seen as practical and experiential:

> *"… where wisdom comes from, it's a lot of thinking back to your past experiences and what you did badly, what you did well and trying to apply that… You've just got to think about in an ideal world what you want to do, and then think how you could possibly get as close to that with what you've got." (B110 FP)*

Discussion

Our research brought to the fore fifteen virtues that medical practitioners consider useful when making ethically wise decisions. Our findings underscore the importance of virtue ethics complementing clinical knowledge to make treatment plans in a manner that is practically wise. Particularities of a given case, along with clinical knowledge, are integral to reaching a diagnosis and proposing a plan of care for individual patients giving primacy to the overall best interest of the patient and that of the community.

Practitioners note that the growing use of ever-closer codification/guidelines of good medical practice is not able to take into account the complexity of caring for patients with multiple comorbidities and within difficult contexts [27]. The culture of mere compliance to rules and guidelines [21, 22] tends to oversimplify the complex clinical situation, making patients single-pathology entities rather than the multifaceted (medically and socially) humans they are. They require a holistic approach, focussing on the *person* of the patient is imperative; science alone is not enough to understand the complexity of the case [41, 20, 42].

A recurrent theme of practice virtues being argued for as important is made in Carr et al (2017) and Kristjansson (2015), and further supported by Jonsen and Toulmin (1988), Pellegrino and Thomasma (1993), Pellegrino (2002), Montgomery (2006), Toon (2014) and Kaldjian (2014).

We provide some empirical evidence to support Oakley & Cocking [18], Oakley [43] and Walker & Ivanhoe [44] who argue that good practice emerges from agreeing the virtues across a group of people who conduct that practice. In this respect, the 15 virtues we present are, in effect, a collective practical wisdom for a community of practitioners who would like to use practice virtues to attain personal and professional excellence [45]

Pellegrino and Thomasma write about the virtues of compassion, prudence, justice, trust, fortitude, temperance, integrity, respect and benevolence (1993). Narrating her encounter with empathetic doctors, Maria Kristiansen narrates how the humanity of doctors helped make sense of the suffering and loss she experienced, long after the clinical encounter had ended (Kristiansen 2018).

The virtue continua show the spectrum of activity for each virtue (Table 1). In the Aristotelian sense, this gives a general character of the virtues. However, in order to develop practice excellence, an understanding of these as practice virtues amongst the practitioners is necessary [12:154,191]. One practitioner possessing all the virtues in their character is an unrealistic ideal [12]. As Curzer writes: “one person can have some but not all the virtues” [46:70]. Instead, they are formed as a collective across the practice community. Thus, the fifteen virtues, though discussed by individuals, are also embedded within the practice community of which these doctors are a part. It takes practitioner diversity and the combination of practical wisdoms from all members to come to decisions that are best for the patient and the community.

Constructing the virtue/cohort table (Table 2) provides further grounds for the argument that some of the virtues are practiced by these cohorts as a “community” rather than in isolation by individual doctors, providing cause for optimism concerning the possibility of “rational agreement” [11:209] on a set of virtues common to the practice. Most participants would search for the “middle course of action”, which lies between the poles—that is between “doing everything possible” or “doing nothing at all”[6], though in certain circumstances, the polar positions were also seen as necessary and morally relevant. This aligns with Aristotle’s virtuous mean as being determined by a person of practical reason [19:24].

The flexibility embedded in the continua allows *phronesis* to be open to moral debate about the virtues across practices, which, according to MacIntyre [12], is vital to establish virtuous practices. Further, as MacIntyre [47] observes, professional education (either in undergraduate or postgraduate forums) is currently missing moral debating resources that allow a non-prescriptive approach to ethical decision-making. By consolidating the fifteen virtue continua as ‘Collective Practical Wisdom’ and conveying them in an enacted seven part film series we created a moral debating resource. Rather than a deontological general prescription as the definitive ‘this is *how* it should be done’, the series are a stimulus for reflection before, during and after medical decision-making. A moral debating resource that allows practitioners to add and to takeaway virtues, move along the continua and integrate with the particularities of the decision-making process for the individual case.

Participants consider that ethically wise decisions are guided by their medical knowledge (*techne) and* virtues, including the ability to understand patients’ values [48]. Participants considered that negotiating treatment plans was important though there are instances where interdependence and relationality, grounded in relational ethics, played a vital role in making practically-wise decisions [49, 42]. We also found that it is helpful to collaborate with those who know the context and can advise whether the decisions made are applicable in the real-world [1]. Furthermore, seeking guidance on making decisions, especially in complex situations, from colleagues, either senior or peers, who have experiential knowledge provides reassurance: a fact corroborated by the nursing profession [50, 51]. Resource constraints (time and finances) affect communication and decisions made with patients and “provide the conditions in which unsafe acts occur” [52]. Worries about litigation (“covering myself”) also has a tangible effect on decisions made [53].

Acts are contextually virtuous [29]. A virtuous act "hits the target" by deriving an understanding of the situation and acknowledging all its pertinent features [22:11] and in so doing requires moral judgement to discern how to act wisely. Our findings emphasize that even when virtues are recognised for that particular practice (e.g. negotiation, reflection, cultural competence, collaboration, recognising limits to treatment etc.), knowing where to act on the continuum (at the poles or the mean) requires discernment that is provided by the intellectual virtue of *phronesis* [12], so moral reasoning and relevance work simultaneously [54].

Phronesis provides the practical know-how needed to turn virtue into successful action and enables the *phronimos* to weigh up the importance of different virtues and competing goals in a given moral situation [21]. While moral virtues enable us to achieve the end, *phronesis*, according to Aristotle makes us adopt the right means to that end [19:161]. Both moral virtues and *phronesis* work in tandem. In the absence of the former, *phronesis* degenerates into a "certain cunning capacity for linking means to any end rather than to those ends that are genuine goods for man" [12:154].Whereas, in the absence of *phronesis*, we may be lost in the moral maze.

Cribb argues that to deliver independent rigorous (moral) thinking, relevant to the situation at hand, without sacrificing rigour for relevance, is a challenge for translational ethics [54]. We argue that based on the theory of virtue ethics, virtues including the virtue of *phronesis,* provide a credible moral framework.

The experiences narrated by our participants informed the scripts (as stated above) for a video series, supported by tutor notes and an app. The enactment of the fifteen virtues in the series provides a credible moral debating resource, applicable in varied contexts, and responds well to the challenge identified by Cribb [54]. Furthermore, the role of doctors is changing from being the sole guardians of medical knowledge [55, 56] to being facilitators of practically wise decisions. On this view, there are calls for introducing practical wisdom during the "formative development of medical students' ethical reasoning" [57, 58:241] as well as "an enrichment of teaching methods" for ethics [59:434]. This has implications for teaching, training and practice, internationally. The tools we have developed answer these calls.

Limitations

Although our study does not, and will not, claim to have captured all the virtues required for good and wise clinical decision-making, or to be offering yet another ontological guide, it does offer a moral debating resource for educators and practitioners in their peer groups to decide on the relevant virtues for their context and the case under consideration.

Conclusions

Phronesis and practice virtues are interdependent. *Phronesis* helps adapt the practice virtues that enable doctors to make the right decisions for *this* particular patient and the wider community. In this regard, the moral debating resource is a credible tool for introducing the concept of *phronesis.* We have captured a starting point in the "collective practical wisdom" from a group of medics at all stages in their careers. These findings suggests that, rather than doctors waiting until they have gone through many different experiences, they have the potential to nurture *phronesis* from early days in training. Medical trainees do not have to wait until they are older to be purveyors of wisdom or wise decisions. Instead, they could start to learn some *phronesis* from the wider medical community at the start of their careers. The videos, and accompanying resources, can be used both as an in-

action and post-action debriefing tool. The tool and the virtue continua support the GMCs 'Generic Professional Capabilities Framework' [60] as well as the 'Outcomes for Graduates' [61].

Future practice, research and policy on medical decision-making would benefit from applying this non-prescriptive approach to addressing the health and well-being of patients and wider society. For example, from a policy perspective, the GMC in its 'Outcomes for Graduates' lays down the professional and ethical responsibilities for its doctors [61:9-10]. There is an understanding that "the aim of medical education is to develop doctors who are reflective, empathetic, trustworthy, committed to patient welfare and able to deal with complexity and uncertainty" [59:431] .The fifteen virtues interpreted from the narratives of our participants (using their language) are the *in-situ* virtues that these practitioners consider important to their practice (Table 1).

As an added element in medical ethics undergraduate and postgraduate programmes, our approach may be used to help examine ethical dilemmas and challenges faced by actors in low, medium or high resource health policy environments.

Declarations

Ethics approval and consent to participate

The ethics approval for this project was sought at the outset, before data collection commenced, from the University of Birmingham (application No.ERN_15-0172) and it was approved by the Science, Technology, Engineering and Mathematics Ethical Review Committee on 28th September 2015. Ethics approval was also sought from the University of Nottingham (ethics ref. no: L13102015 SoM Birm ERN_15-0172), the University of Warwick (BRSC ref: REGO 2015-1720) and Ministry of Defence REC (MODREC). Approval was given on 25th October 2015 and 4th November 2015 from the Universities of Nottingham and Warwick, respectively. Approval was given by MODREC on 4th May 2016 (reference number: 724/MODREC/16). Ethics approval was also obtained before commencing observations in the second phase of data collection from the Health Research Authority (IRAS project I.D. 227550). Approval was given on 8th August 2017 (REC reference: 18/HRA/0203)

Consent to participate in this study was obtained from all participants before commencing interviews and observations.

Consent for publication

Consent was obtained from the participants for use of anonymized quotes for publication.

Availability of data and materials

The datasets generated and/analysed during the current study are available at: https://www.birmingham.ac.uk/Documents/college-social-sciences/social-policy/phronesis/phronesis-in-medical-decision-making.pdf

The dataset that has all the 15 virtues presented as our findings is available as manuscript data.

Competing interests

None

Funding

Arts and Humanities Research Council (AHRC) research award funding: AH/M006646/1

Authors' contributions

Mervyn Conroy (MC): Project management of the research, methodology design and writing, writing the outline and abstract, additions to the background, methodology, discussion and conclusions plus a full and final edit.

Aisha Y.Malik (AM): Research fellow: data collection, data analysis, presenting the findings and introducing the staged process of phronetic decision-making, writing the initial draft (contributing to Background, methodology, major contribution to findings (and the virtue contua table, tabulating the virtue ethics framework to construct the virtue/cohort table) major part of the discussion and conclusion) and subsequent, multiple, revisions and the final version of the paper.

Catherine Hale (CH): Co-Investigator, assisting PI with project management. Research data collection, coding and analysis of findings. Additions to the background, methodology, discussion and conclusions.

Catherine Weir (CW): Research fellow :data collection, data analysis including patient and community perspectives on trust and phronesis, contributing to the findings. Communication of findings via social media, conference posters and conversion of virtues into series of practitioner questions. Development of evaluation framework

Alan Brockie (AB): Co-Investigator for the project. Member of the operations and steering groups, involved in data collection, coding and data analysis, contributed to refining of the virtues, development of the virtue continuum table, full review and critical edit of the draft manuscript at different stages of development and review of the final version of the paper.

Chris Turner: (CT): Co-Investigator. Data collection, analysis of findings. Additions to the background, methodology, discussion and conclusions.

Acknowledgements

This research was made possible through the AHRC grant (AH/M006646/1). We would like to thank our participants without whom this research would not have been possible. We are grateful to Dr. Iestyn Williams for providing useful comments on the earlier drafts.

We acknowledge University of Cumbria for producing the video series that provide the moral debating resource/tool. We would also like to thank Dr. Richard Bosworth for developing the Wisdom Wheel App. (https://phronesis.medicloud.io/) based on the concept developed by AM of a staged approach of virtues to decision–making.

Abbreviations

LMIC=Low and Middle Income Countries.

FY=Foundation Year.

GP=General Practitioner

V.=Virtue

MDT=Multidisciplinary Team

Obs.=Observations

GMC=General Medical Council

PMC= Phronesis and the Medical Community.

Exp.=Experienced

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