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Clinical information needs and access for NHS Highland staff

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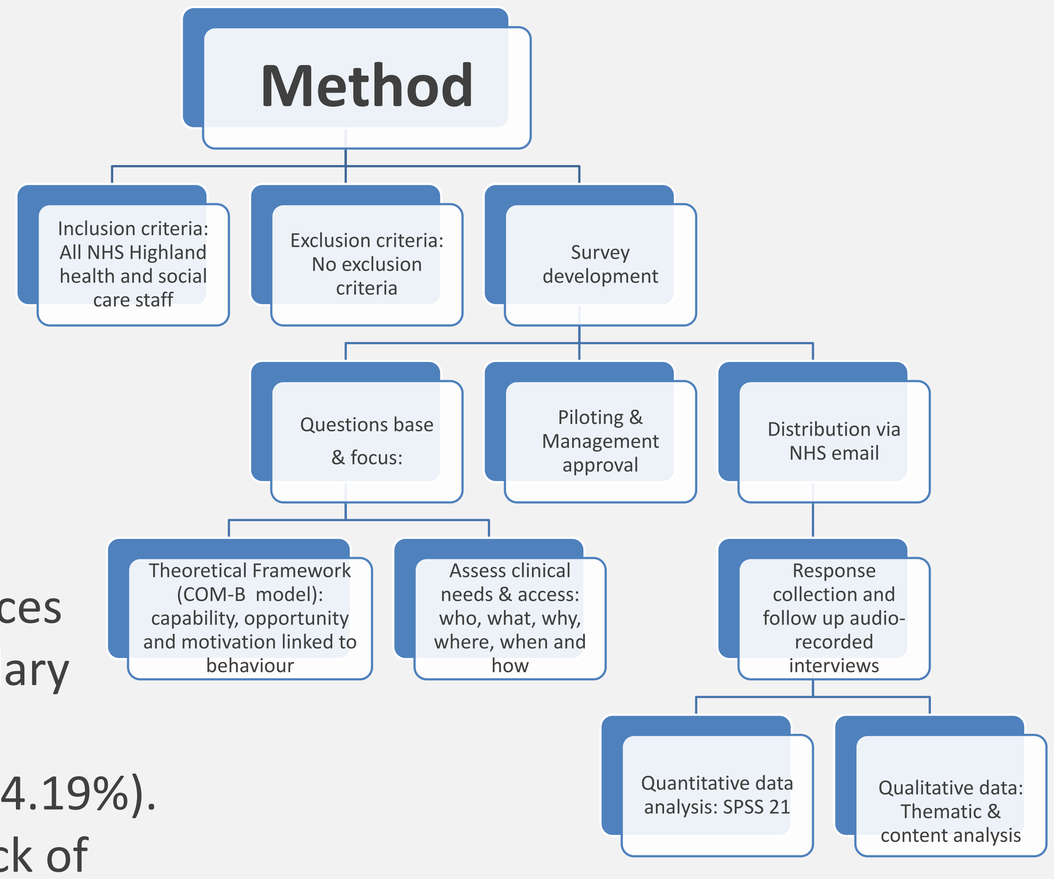
Background:

Clinical information is required by health professionals to promote better patient care and safety[1]. This study aims to identify clinical information needs and related access of NHS Highland clinical staff.



Results:

The survey was completed by 157 participants (28.95% male) from different NHS Highland areas with varying education levels (Table 1). The most frequently accessed clinical information sources were: colleagues 66%, SCI store 57.1%, BNF 37% and NHS formulary 20% (Table 2). Staff required clinical information mainly for: therapeutics (29.80%), pharmacology (23.84%) and guidelines (34.19%). Staff strongly believed that slow intra- and internet (37%) and lack of time (26%) were barriers to accessing clinical information.

Table 1. Staff speciality responses (%)

Answer Choices	Responses	
Accident & Emergency	5.10%	8
Cardiology	3.82%	6
Care of the Eldery or Geriatric care	3.18%	5
Dentistry	4.46%	7
Dermatology	0.64%	1
General surgery	3.18%	5
Gastrointestinal	0.00%	0
Intensive care	1.91%	3
Laboratory	1.91%	3
Gynaecology and Obstetrics including Maternity	4.46%	7
Neonatal	0.00%	0
Neurology	1.91%	3
Oncology	8.28%	13
Orthopaedic	2.55%	4
Paediatric	1.27%	2
Pharmacy	6.37%	10
Maxillofacial or Plastic surgery	0.64%	1
Respiratory	2.55%	4
Social Care	1.91%	3
Urology	1.91%	3
Other (please specify)	59.87%	94
Total Respondents: 157		

Table 2. Frequency (%) access clinical information sources

	Daily	Weekly	Monthly	Less often than monthly	Never	Total
Highland Formulary	20.00% 31	28.39% 44	13.55% 21	18.71% 29	19.35% 30	155
BNF	37.82% 59	28.21% 44	10.90% 17	14.10% 22	8.97% 14	156
NICE guidelines	2.61% 4	24.18% 37	30.72% 47	35.29% 54	7.19% 11	153
SIGN guidelines	4.52% 7	21.94% 34	30.97% 48	34.84% 54	7.74% 12	155
Wound Formulary	2.68% 4	5.37% 8	7.38% 11	24.16% 36	60.40% 90	149
Policies Library	5.92% 9	19.74% 30	23.68% 36	32.89% 50	17.76% 27	152
The Knowledge Network	2.01% 3	8.05% 12	28.19% 42	30.87% 46	30.87% 46	149
Medicines Information	3.97% 6	5.30% 8	18.54% 28	29.14% 44	43.05% 65	151
SCI Store	57.14% 88	16.88% 26	3.90% 6	5.19% 8	16.88% 26	154
Renal Drug Database	0.67% 1	5.37% 8	4.03% 6	10.07% 15	79.87% 119	149
Medicines Complete	4.73% 7	8.11% 12	2.03% 3	6.08% 9	79.05% 117	148
NEWT Guidelines	0.00% 0	1.34% 2	2.68% 4	6.04% 9	89.93% 134	149
Handbook for Enteral Feeding	0.67% 1	1.33% 2	0.67% 1	8.00% 12	89.33% 134	150
Standard Operating Procedures	4.58% 7	12.42% 19	11.11% 17	29.41% 45	42.48% 65	153
Web of Knowledge	1.97% 3	4.61% 7	5.92% 9	10.53% 16	76.97% 117	152
Colleagues	66.00% 99	22.67% 34	4.67% 7	1.33% 2	5.33% 8	150

Table 3. Examples of successful clinical information searches

Information needed	Source used	Device used	Where (place)	Time taken
Pathogenesis of central pontine myelinolysis	Wikipedia	Smart phone	operating theatre	5 mins
Lymes disease	Guidelines Highland intranet	PC	consulting room	<5 mins
Enoxaparin dose in obese patients	Medicine information	Ipad		10 mins
Dosing of Ceftriaxone	BNF	Paper	A&E	1 min
Differential diagnosis for low serum alkaline phosphatase	Google	Desktop PC	office	40 mins approx.

Table 4. Examples of unsuccessful clinical information searches

Information needed	Source used	Device used/ where	Why didn't succeed	How solved
Occupational health	Intranet	.....	Homepage brings irrelevant pages	.....
Articles on parenting	Didn't know which to use	.....	No knowledge to get relative articles	Went to NHS local library
Diabetes	SCI store	PC	.....	By reloading page
Naltrexone therapy for alcohol cravings	Sign 74 guidelines	Online	Guidelines out of date	.....
Rare medical condition	Usual sites	.....	.....	Asked colleague and found from patient information site

Table 5. Interview analysis

No.	Daily information source: (define colleagues)	Type of information you ask daily?	Preferred platform/ reason	Define strongly agreed/ agreed barrier	Reason for unsuccessful search/ solutions	Access improvement
1	Psychiatry colleagues NHS librarian	For patient information Immediate information For evidence base	Paper and book/ Easy to read Electronically/ easy to search	Lack of time/ busy with patients Slow network/ rural area	Didn't know information source/ solved by librarian help	Wasn't sure
2	Medicine information (online service) Colleagues: multidisciplinary team	Drug administration General questions	Desktop/ available	Lack of search skills, no courses on how to search	Couldn't find informati-on/ Phoned CT scan to ask	Trustworthy guidelines in laptop or tablet
3	Multidiplin-ary team	Clinical query	Desktop/ available, less complicated	Lack of search skills/ resources not available	lack of search training/ asked colleague	More training and access to related sites
4	GP practice, local pharmacists, community pharmacists	Treatment indication, interactions, side effects	Desktop/ available, easy to access, network connection	Slow network	No access, technical connections/ Didn't solve it	Put all databases in one place Direct links to local formulary Regular updates
5	Team colleagues in primary care, specialised pharmacists	Specific information such as pain management	Laptop/ convenient, available, software in the laptops	Slow network, difficult to connect to online sources	Didn't know where to get the information, didn't solve it	Better database, easy access to database, better network
6	Media: multidisciplinary team. Extended: specialists and experts	Management and products, according to speciality	Desktop/ big screen at office, available	Lack of search skills, difficult to find information, limited access to databases	NICE guidelines was not well organised, difficult to find information	Provide access to all sites
7	No daily access needed	----------	Desktop, available	Not sure	Difficult search online, asked colleagues	Guidance to trustworthy and dependable sites
8	Multidisciplinary team	General and specific question	Desktop/ available, easy to use	Slow network	Didn't remember	Speed of network
9	Multidisciplinary team	X-ray reports and laboratory data	Laptops, useful, better movable	Lack of licensed resources/ Lack of search skills/ relying on librarian	Difficult to access patient data in SCI Solved by phoning specialist who has access	Training on how to search Provide access license to useful data

Discussion:

Clinical information needs varied according to specialities (Tables 1, 3 and 4).
Staff explained the availability of desktop PCs made it their priority to access clinical information (Table 5).
Almost half of participants used their own smart devices to access clinical information. Staff interviewed mentioned that colleagues were their quickest and easiest sources of information. Slow intra- and internet plus lack of time were the leading barriers to accessing clinical information.

Conclusion:

Staff had the capability, opportunity and motivation to seek different clinical information from a range of sources. Access barriers could be solved by training, providing printed sources (per specialty/area) and designing robust clinical information apps. We recommend further investigations to produce one platform with all clinical information required by NHS highland staff in one place.

Reference:
1. Our evidence | Cochrane [Internet]. Cochrane.org. 2016 [cited 13 November 2016]. Available from: http://www.cochrane.org/evidence

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