Barriers and facilitators in using a Clinical Decision Support System in Falls Clinics for Older People: a European Survey
European Geriatric Medicine

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Supplement 3: Open coding of open text box entries

Entered barrier by participant	Coding by researchers
I don't know why, not having used it I can't make a judgment	Can't say anything about barriers and facilitators without seeing CDSS
I have never used a CDSS so I cannot express myself in this regard	Can't say anything about barriers and facilitators without seeing CDSS
I have not seen the support system so cannot give a meaningful answer	Can't say anything about barriers and facilitators without seeing CDSS
I don't have access to the system	Can't say anything about barriers and facilitators without seeing CDSS
Access to other professional groups? District Nurse	Make CDSS available to other health care providers

The CCG pays for optimise Rx Have you thought of making this a 'score' in which case our IT systems could calculate. Would be good to have information to help patients make decisions too. I end up in battles with benzos and prochlorperazine demands at times- even frail elderly are keen!	Shared decision making with patient	Suggestions for a different system	
I would like input into the design	Wants to participate in the design		
I think all the factors mentioned play a role except My lack ... and My resistance ...	Wanted to select all items in the provided list		
I wanted to answer many more than 8 of the options above. As many are relevant.	Wanted to select all items in the provided list		
It needs to be as simple and as quick to use as possible because then it will gain widespread use. We don't just want a system for falls clinics and geriatricians, we need this to be used by GPs, trainees and non-geriatricians.	Make CDSS available to other health care providers	Easy to use	System must respond quickly
Also accessible for pharmacist	Make CDSS available to other health care providers		
The one currently in use cannot find the diagnoses in the medical record where they are always marked. The diagnosis must be specifically structured so that the system can find it. This is quite unfortunate and hard to believe in the digital age that you can't	Data quality		
Ease of use/time taken during or prior to consultation	Easy to use	Takes too much time to work with the CDSS	
I'm already too old to familiarise myself with the new system. Otherwise I try to rationalize drug treatment for the elderly	Resistance to change		
If such a system is not compatible with an electronic medical record that is already being used.	Integration with digital systems		
Support for medical program: integration of the decision system	Integration with digital systems		
Must be integrated into the EHR (Electronic Health Record)	Integration with digital systems		
It would be ideal if the decision support system could be activated directly on fmk (Common Medicine Card) if needed	Integration with digital systems		
It is important that it can be used in conjunction with the computerized medical history system of each center.	Integration with digital systems		
Integration with electronic prescribing and automated medicines reconciliation	Integration with digital systems		

1. If it isn't on my primary care IT system. 2. I am building one at present using primary care IT in SystmOne (should be ready for piloting in the next few weeks in our care home visiting service) and have created one in EMIS that is being piloted	Integration with digital systems		
If it is another system to log into rather than being incorporated into an existing system	Integration with digital systems		
If it's overly complicated. It needs to work alongside / with / enhance current systems	Easy to use	Integration with digital systems	
If insufficient consideration is given to the individual patient and the circumstances. Each patient remains individual and sometimes there is a higher goal than risk of falling (eg comfort)	Personalized to patient's complex current medical situation		
Opinion of our health management	Supported or approved by professional organisation		
I'm not sure the IT system in Wales is up to it.	External factors		
New EPD has yet to be designed	External factors		
Must be fast and integrated with the patient information system	System must respond quickly	Integration with digital systems	
Hospital authority issues	Supported or approved by professional organisation		
Lack of time	Lack of time		
No time	Lack of time		
Lack of time	Lack of time		
Too many alerts every time he prescribed digitally: for example if he prescribed quetiapine I will get an alert that you interact with X drug and then another alert to do the visa, as I get another alert that causes falls I will take 10 minutes to make a recipe. And I don't need to be told the RAM of each drug that I prescribe	High frequency of alerts	No clinically relevant alerts	Doctor's judgement is better
The alternatives are not always realistic and feasible, usually the need for a certain drug is greater than the risk. I would not have to continually motivate a clinical choice in which I have taken into consideration many clinical, psychological and economic factors that I fear would not always be taken into consideration by the support system, and I would not like to find myself in a sort of "competition	Indicating a reason when overriding an alert	Personalized to patient's complex current medical situation	Doctor's judgement is better
when the support costs extra work, while no advice comes out that I did not come up with myself. (I don't think alerts are	Time investment is greater than the benefit of the result/advice	Doctor's judgement is better	

desirable, it seems to be an advisory model, because the model does not know the patient and all his variables, the doctor knows more			
I think that I can make enough decisions myself and that I can always apply it better to the situation of the individual patient than an algorithm. I think it takes more time, than that it will benefit me	Doctor's judgement is better	Time investment is greater than the benefit of the result/advice	
takes too long, does not provide extra information compared to what I already know	Time investment is greater than the benefit of the result/advice	Doctor's judgement is better	
The prescriber always has to consider the benefits and drawbacks of prescribing, especially to the geriatrician. Often, in the absence of a better alternative, non-recommended medications (including pain management) must also be used deliberately.	Doctor's judgement is better		
If you are a geriatrician this should be part of your core knowledge	Doctor's judgement is better		
Advice too broad for the situation	Personalized to patient's complex current medical situation		
Decision support is / was clumsy and ignored the individual, so the system does not understand why it is sometimes necessary to act against general recommendations. I haven't experienced any "geriatric decision support". All the factors on the above list are	Personalized to patient's complex current medical situation		
There is a problem if the focus goes too much on the risk of tipping, because for many patients they are indicated for use and appropriate, even though the risk of tipping could be increased: one should not make decisions based on just one outcome.	Personalized to patient's complex current medical situation		
I run a falls clinic. My patients are medically complex with multiple conditions often contributing to their falls. It would be difficult to replace careful history taking with a more simplistic system. If it is not simplistic and requires entry of a large amount of data, it becomes cumbersome.	Personalized to patient's complex current medical situation	Easy to use	Add patient data
If its integration into the patient system overburdens it / the	Technical issues	Easy to use	

program will crash. Or if it prevents the use of patient records without the need for clicks etc		
immature IT implementation (complicated operation), increased time expenditure	Takes too much time to work with the CDSS	
Slowness	System must respond quickly	
Speed of use and use on different digital platforms	System must respond quickly	Integration with digital systems
Already in our current electronic medication system there is a warning system, since there is a lot of unnecessary comments and moreover sometimes a full screen of information I do not bother to read this. So too much is not good either	No clinically relevant alerts	Too much text
If it has to be in a separate screen, clicking back and forth is terrible.	Integration with digital systems	Easy to use
cumbersome handling	Easy to use	
Inadequate number of healthcare staff is a restriction to use this clinical decision support tool.	Environmental constraints	
My problem is not so much in which medication I have to deprescribe, but especially in who then has to do it (Me? GP? Follow up?) This tool does not help with that.	Problem lies elsewhere	
The relevance of percentages for a patient; with an increased risk and a very increased risk you often use the same policy.	No clinically relevant alerts	
I want the information to be useful and reliable	No clinically relevant alerts	Reliability
Alerts you to things that are too insignificant	No clinically relevant alerts	
If I think that the advice given is frequently wrong	Reliability	
Resistance to more and more lists, calculators, etc.	Resistance to change	
Response speed It has to be agile	System must respond quickly	
lack of network signal	Environmental constraints	
It must be approved by the country's health authorities as these are untrustworthy and unjustifiable	Supported or approved by professional organisation	
if the time consumption is large	Takes too much time to work with the CDSS	
If it takes a long time, it is a barrier	Takes too much time to work with the CDSS	
It should not take too much time	Takes too much time to work with the CDSS	
If it takes a lot of time	Takes too much time to work with the CDSS	

If it takes a lot of extra time during a long-time patient visit.	Takes too much time to work with the CDSS		
If it would take a lot of time (> 15 minutes)	Takes too much time to work with the CDSS		
Additional time required	Takes too much time to work with the CDSS		
Time consuming and threat of limited contact with the person / mentee	Takes too much time to work with the CDSS		
If it slows down the consultation too much and requires repeated clicks	Takes too much time to work with the CDSS	Easy to use	
Anything which significantly slows workflow would be a problem and anything which helps speed it up would be helpful	Takes too much time to work with the CDSS		
If it takes a long time and/or I need to duplicate information	Takes too much time to work with the CDSS	Add patient data	
If it is slow. If I need to enter a lot of data (slow process).	System must respond quickly	Add patient data	
A lot of click work without specific advice.	Easy to use	Personalized to patient's complex current medical situation	Time investment is greater than the benefit of the result/advice
Lack of clarity in the uncertainty of the advice and too high predictive capacity for the individual patient, with lack of evidence of added value in practice	Uncertainty of advice is not clear	Evidence of added value in clinical practice	
The hospital management (lack of problem awareness) staffing, lack of personnel and time in hospital operations	Environmental constraints		
It is very unlikely that the trust I work in will subscribe to this system	Supported or approved by professional organisation		

Entered facilitator by participant	Coding by researchers		
Should be a team decision and supported by management	Supported or approved by professional organisation		
There must be sufficient scientific evidence to support its use	Evidence of added value in clinical practice		
In continuation of "if I get it recommended by a colleague", there is an important factor for me that I want to be absolutely sure that the clinical decision support system is fully tested and evidence-based. I need to be sure that the decision-making system is safe to use in my clinical	Evidence of added value in clinical practice		
CDSS based on the latest meta-analyses in the area of side effects in people with FS (abbreviation of participant without further explanation), because Beers and START STOP are no longer valid	Based on latest scientific evidence		

and we cite them; : learns and updates the project authentically and not on time			
If there is clear evidence that it works and that it is featured in journals, guidelines etc.	Evidence of added value in clinical practice		
Being able to adapt the system to my pharmaceutical handbook (eg RSA (abbreviation of participant without further explanation))	Customized to a specific knowledge source		
Simplicity and not too much information in the basic view. Additional information could be placed behind a click window, for example. Pop-ups must not be locking the program, but must be in the background	No blocking pop-ups	Additional information	Easy to use
The system generates information that can be ignored or ignored as the situation requires, without having to click warning windows out of the way	No blocking pop-ups		
I think it would be nice if, at an outpatient clinic, you were asked whether you were ready to perform a review once a year and with a hospitalized patient at least once a week, provided that medication changes were made and before discharge	Suggestions for a different system		
a patient letter or med overview is also rolled out with an explanation, what the patient can take and can also be sent to the doctor.	Information communication to patient		
It is a support in the discussion with family members aimed at reducing the use of antipsychotic drugs	Shared decision making with patient		
Improving the quality of life of the patient by meaningful drug reduction (with the side effect of cost reduction	Beneficial to patient care		
?	-		
Nothing more to add	-		
Out of curiosity, I sometimes check if the decision support has received useful information about the patient.	Data quality	No clinically relevant alerts	
For primary care in the UK - if this could be integrated into the clinic systems such as EMIS or system one - as are other decision aids such as qrisk then it would be attractive. Qrisk is integrated into the system and I just enter qrisk and it will calculate a risk score. If it required me to up load data into a webpage etc this	Add patient data		

become less attractive to use in a 10 minute appointment		
Integrated with the electronic medical records system (using without leaving the open visit)	Integration with digital systems	
Does not slow down program usage and patient care	Integration with digital systems	System must respond quickly
No time	Lack of time	
Objectifying risks to other doctors	Make CDSS available to other health care providers	
It is also important to me that others use it	CDSS usage is recommended by colleagues	
Accessible in primary, secondary, intermediate and community care settings	Make CDSS available to other health care providers	
Patient's perspective	Information available for patients	
Integrated in the file, not a separate program	Integration with digital systems	
That it is automatic and that it does not count as quality control.	Integration with digital systems	
It is useful to produce a report with the estimate of the risk of the patient as it happens for example for the risk of fracture.	No clinically relevant alerts	
Update me	-	
When patients ask for it	If the patient wants me to use the system	
Time	Takes too much time to work with the CDSS	