Artificial Intelligence governance and prioritisation tool: How do we responsibly pick the right applications for a District General Hospital?

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Purpose

- As the validation and use of Artificial Intelligence (AI) throughout healthcare has become increasingly topical there is a swell of noise from across clinical and allied healthcare groups to deploy applications which will have efficiency or quality benefits in their field
- On an individual basis each use case may have the potential to improve quality and efficiency
- Financial constraints and the potential for inequality must be considered before deploying a new AI tool
- An AI request form and prioritisation tool can be used within district general hospitals to provide local AI governance teams with a mechanism to oversee the equitable and fiscally responsible deployment of AI

Method and materials

- An AI governance board was set up to ensure that AI deployment is:
  - **safe**
  - **equitable**
  - **fiscally responsible**
- A Microsoft Forms-based "AI Application Request Form" was built to capture ownership as well as clinical, technical, and financial considerations
- Power Automate drives population of the data gathered from submission to a SharePoint List
- An assessment matrix was created for the board to quantitively assign a score for prioritisation. The process was piloted with an AI facilitated coding application.

Results

- **The tool has been used for 6 cases:**
  - **3** have been reviewed and approved to progress to the outline business case stage
  - **3** are awaiting review by the Governance board
- The combined qualitative and quantitative data has facilitated Governance board discussions and aided in identifying gaps or further information required for decision-making
- **Feedback highlights:**
  - the tool's ease of use
  - relevance for radiology and non-radiology uses
  - utility to track the implementation of AI applications across the trust

Conclusion

- **The AI request form:**
  - empowers stakeholders
  - creates a log of requests
  - establishes a list of approved applications
  - allows comparison between applications
  - tracks the governance and approval steps for radiological and non-radiological uses
- **The prioritisation tool allows for:**
  - fair and responsible implementation
  - governance approval before moving to outline business case

Microsoft Forms-based "AI Application Request Form" is completed by stakeholder → **Power Automate automatically populates a SharePoint spreadsheet** → **AI governance board uses assessment matrix to assign quantitative prioritisation score**

Request to implement Artificial Intelligence Form Questions:

1. Division
2. Service or Department
3. Name of process owner
4. Name(s) of Subject Matter Expert(s)
5. Describe the **problem** you are trying to solve
6. Describe the **current** process that is taking place prior to the use of AI
7. If you have any specific AI applications in mind, please list their details below
8. Will the proposed application be used for diagnosis, prevention, monitoring, treatment or alleviation of disease?
9. Describe what the proposed AI application would do
   Consider the following:
   - What are the input variables and what is the desired output?
   - Who are the end-users?
   - What is the rationale for using AI to solve the problem?
   - Have any other solutions been considered?
10. Where will the AI application be used?
11. Describe the potential benefits, including patient experience, regulatory, financial, safety and any relevant KPIs.
    Note: You will need to score the solution against the benefit categories next
12. Select the relevant Patient Safety impact score
13. Select the relevant Clinical Quality impact score
14. Select the relevant Regulatory impact score
15. Select the relevant Financial impact score
16. Select the relevant Adoption impact score
17. Select the number of patients that will benefit from this solution per month
18. How will the success of the AI application be measured? Describe the plan for evaluating the impact of this AI application on patient care.
19. Will the AI application need to integrate with other IT systems, e.g. EPR, PACS?
20. Will the AI application require associated hardware, e.g. wearables, scanners?
21. Describe the patient groups that will benefit from this AI application and the impact to them.
22. List staff groups that have been identified as key stakeholders and the impact to them.
23. List any opportunities for external funding of the solution
24. Detail the plan for embedding this AI application into the workflow
25. Outline the impact/risk of doing nothing
26. Is this request supported by the Divisional Lead?
27. Attach file(s)

Impact score

Patient Safety	Relates to actual patient safety incident	6
	Relates to a near miss patient safety incident	5
	Reduces a theoretical patient safety risk	4
	No patient safety risk	0
Clinical Quality	Aligned to department's clinical services priority	3
	Reduces variation, improves evidence-based practice, improves communication	2
	Nice to have	1
	No impact	0
Regulatory	Response to specific new issue (e.g. CQC report, new guideline, CQUIN)	3
	Improves compliance with existing national/organisation-wide issue or policy	2
	Improves compliance with existing local department issue or policy	1
	No impact	0
Financial	Substantial impact on income for multiple departments	3
	Moderate impact on income for multiple departments or substantial impact for one department	2
	Minimal impact on income	1
	No impact	0
Adoption	Significant improvement in workflow	3
	Moderate improvement in workflow	2
	Minimal improvement in workflow	1
	No impact	0

Volume Score

Number of patients per month	100+	5
	50 – 100	4
	20 – 50	3
	10 – 20	2
	0 – 10	1

Prioritisation Matrix

Volume \ Impact	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
5	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
4	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72
3	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
2	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Priority Score: P1: ≥ 50 | P2: 30 - 49 | P3: 10 – 29 | P4: ≤ 9