



CONSIDER THIS:

- Can you reflect on your behaviours and actions at work?
- Can you change them to reduce the risk of errors?
- Can you develop your leadership skills and style to improve patient safety?

Can leadership reduce errors and improve patient safety within radiology services?

Introduction and background

Radiology presents risks to patient safety such as ionising radiation and magnetic fields. Despite legislation, guidance and standard procedures, errors still occur which are linked to human and organisational factors. Leadership as a concept can potentially influence patient safety by creating the optimum environment and behaviours. A review was undertaken to evaluate the evidence on how leadership practices and behaviours can influence errors and patient safety.

Methods

A systematic review study was undertaken according to PRISMA guidelines. Databases were searched for evidence from the last 10 years (2015 – 2025). Inclusion criteria included primary quantitative and qualitative research studies that examined leadership and safety within healthcare environments (not solely radiology).

Results

17 studies were included within the review (quantitative and qualitative studies, mostly cross sectional in design and one quasi-experimental study). Main findings showed that leadership positively influences patient safety directly and indirectly via various behaviours and mechanisms.

Conclusion

Leadership positively influences patient safety directly, or indirectly, via mechanisms such as organisational commitment, psychological safety and cooperation facilitation. Leaders should undertake leadership training, and leadership should not focus on a specific style but should incorporate behaviours that create a positive safety culture environment including support, training and education, clarifying expectations, open communication and non-punitive approaches to incidents.

Key learning points

- Positive leadership is associated with improved patient safety culture and safer staff behaviours.
- Leadership promotes staff engagement, empowerment, teamwork, and learning. Leadership can also ensure compliance with protocols, legislation and procedures.
- Leadership improves safety indirectly through teamwork, communication, organisational commitment, and staff support.
- No single leadership style is superior; a flexible combination of leadership behaviours is most effective.
- Psychological safety is essential — staff must feel safe to report errors without fear of blame. Non-punitive, supportive leadership encourages learning from errors and continuous improvement.
- Leadership skills can be developed through training, education, and clinical experience.

Further info. and author

Further information (including contact information) can be seen within the e poster and stack, including tips for radiology leads and all radiology staff, original project, and references.

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