

: *What if decision support is incorrect?*

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Analytics and decision support are intended to improve decision making. Both types of systems commonly provide "answers" and information. The "answers" may be incorrect, wrong or misleading. Why? People construct the decision support and analytic systems that managers use to assist in their decision making. People make mistakes and errors during systems design, development and maintenance that can lead to suboptimal or incorrect decisions by managers using the systems.

Analytics and computerized decision support systems can provide poor information and incorrect "answers" and that may be unavoidable. Perhaps we can minimize the problem. The bias or failure of computerized decision support may be difficult to detect and hence the negative consequences may multiply and persist. Organizational consequences of incorrect decision support can be extremely large and negative as can individual consequences for managers using the applications and in some cases negative for the developers.

When is the harm the greatest? The more important the decisions supported by the system the greater the potential for harm. Also, the more frequently a flawed system is used without realizing its limitations, the more harm that is done. For example, a clinical medicine decision support system may have the potential for doing great harm.

Technological solutions can have serious flaws. A poor model specification can result in inaccurate forecasts. Bad data used with a well-constructed model can also lead to errors. Poorly displayed results can lead to misinterpretation. Incomplete or partial results can distort perceptions of managers. Slow or delayed analyses and results due to system failures or data capture problems can impact the timeliness of decisions in a negative way.

What problems have been detected in flawed systems? Data entry errors, non-representative data, software programming errors, decision logic errors, incorrect protocols, overweighting and biased assessments.

Decision support and analytics require the user to assess the reasonableness of the "answers" and the information provided. Computer support is **not** a substitute for critical thinking. A knowledgeable and experienced person using a tested and validated analytical decision support system will make better decisions than unaided decision makers. Also, human decision makers can monitor and verify

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the system results during ongoing use.

So if decision support is incorrect, then human decision makers using the system should catch the error and request that the system be improved. People make mistakes and every decision is not "correct" or "optimal", but managers should expect analytics and decision support capabilities to be well-constructed, tested and validated.

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