

# **Implementation Research Training: Thorny Methods Issues in an Emerging Field**

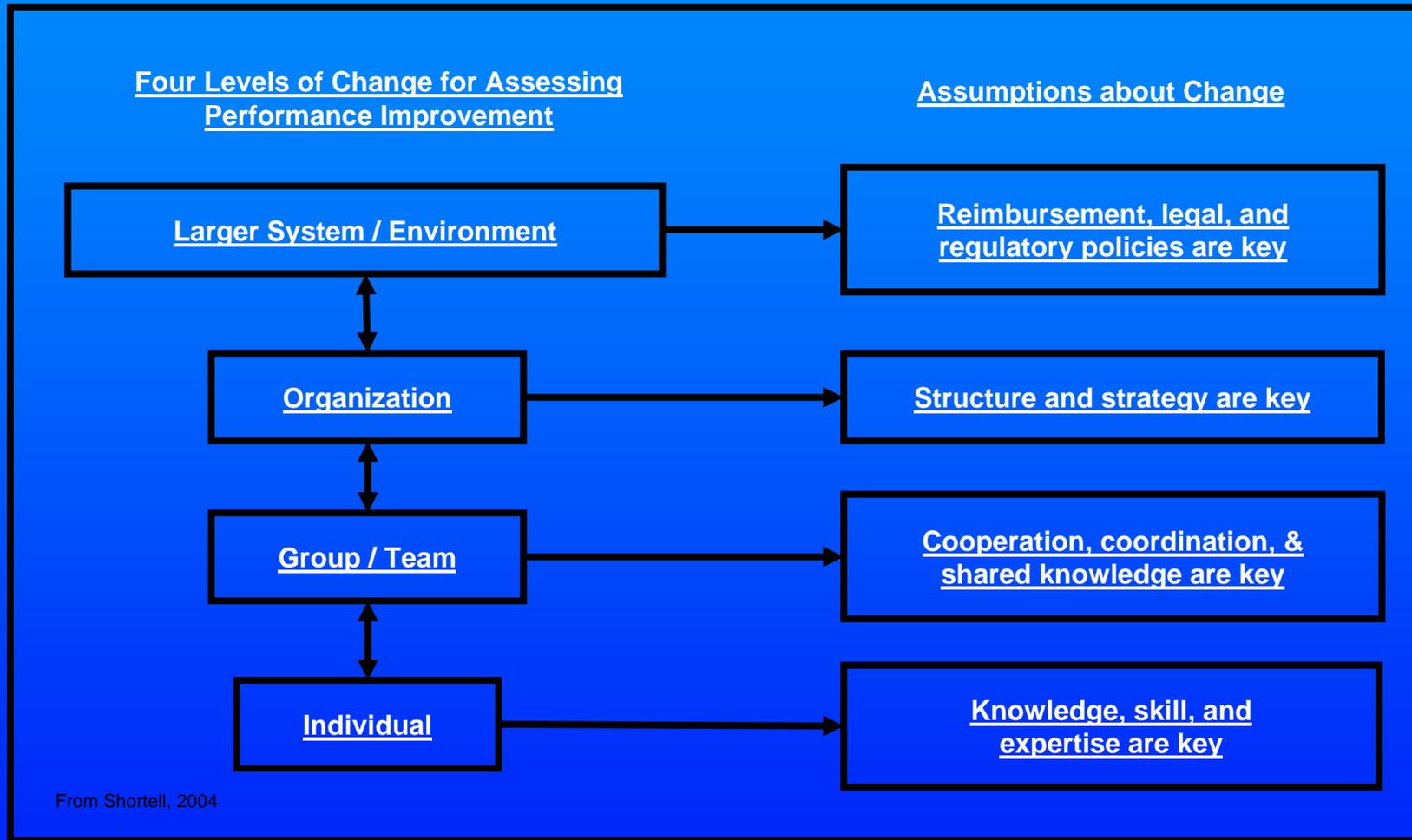
**John Landsverk**

**Child & Adolescent Services Research Center  
Children's Hospital – San Diego**

**Brown School of Social Work  
Washington University – St. Louis**

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# Implementation Research as a Multi-Level Problem



# Design Issues

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- Multi-level phenomena require multi-level designs that are complex and not well developed/codified
- The disappearing N problem as one moves from lower to higher levels (e.g., the client-provider to organizational and system level)
- The randomization problem – use of randomized designs or hybrids of randomized and non-randomized designs at different levels
- An example of OK – mixed methods design to address insufficient power at the agency level

# Emerging Complex Multi-Level Designs and Mixed Methods

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- Alternative multi-level designs are emerging – randomized implementation trial designs (see session by Brown, Poduska, and Wyman from the PSMG)
- Calculation of power for three or more level designs has not been worked out - conceptualize as an issue of optimization of power in an inherently insufficient power context (Center for Health Statistics at UIC)
- Use of qualitative methods to examine processes not open or sensitive to quantitative designs – CA 40 study and counties choosing not to participate in an IR trial.

# Methods Training in the Emerging Field

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- Develop complex designs and address issues of randomized and non-randomized designs with senior and junior implementation researchers – example from our NIMH funded work this next summer – post-hoc examination of designs currently in the field.
- Develop partnerships between qualitative and quantitative methodologists – single study example of Aarons, Palinkas and Slymen in the OK IR study.
- Develop the qualitative and mixed methods approaches within existing quantitative development groups – special interest group in PSMG

# Challenge of Methods Training

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“many assessment techniques developed in engineering and used in quality improvement – i.e., statistical process control, time series analyses, simulation, and factorial experiments – have more power to inform about mechanisms and context than do RCTs, as do ethnography, anthropology, and other qualitative methods”

(D.M. Berwick, 2008)