

# Teaching the Interplay Between Social Determinants of Health (SDH) and Health Outcomes: the ETGAR Student-Delivered Service



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## INTRODUCTION

Teaching medical students about their role in tackling disparities is of high priority. While hospital rotations do not generally result in greater understanding of social determinants of health (SDH),<sup>1</sup> home visits may pose a special opportunity to understand their effects.

We describe ETGAR,<sup>1</sup> a student-delivered service for ethnically diverse and low-socioeconomic populations in Israel's disadvantaged northern periphery. It aims to support disadvantaged patients in their transition from hospital to home, while improving students' communication skills, cultural competence, and understanding.

## METHODS

Medical students on entry to clinical studies undergo 2-day intensive training on transitions of care, health literacy, medication discrepancies, cultural competence, and community services. A workshop on simplification of medical information focuses on writing in language free of medical jargon and summarizing the hospitalization simply and coherently. Actor simulations of visiting patients at home allow students to practice and receive feedback on engaging with patients, language discordance, and cultural competence.

Patients identified by ward staff as in need of support due to language, health literacy, or social circumstances are referred to students who meet them to offer the service and arrange a home visit within 10 days of discharge. Students simplify the hospital discharge letter, review it for accuracy with a senior ward physician, and have it translated if required. During the visit, students review the simplified letter with the patient, identify concerns around support, independence, and mobility, and liaise with

community services. They assess the quality of care transition (CTM3)<sup>2</sup> and check medications for discrepancies.<sup>3</sup> Students conduct home visits alone or in pairs. Support is provided by a faculty coordinator and hospital-ward tutor if questions arise.

Students are evaluated for self-reported confidence in transition in care<sup>4</sup> at the beginning and end of a course, clarity and language of their simplified discharge letters<sup>5</sup>, and home-visit report. An independent researcher calls the patient 2 weeks after the visit for feedback and repeat CTM3. Approval was obtained through hospitals' ethics committees.

## RESULTS

Thirty-five of 100 eligible students volunteered to deliver the service to 158 patients (134 Jewish; 24 Arab) in four affiliated teaching hospitals. Forty-six percent of patients had low income and/or < 12 years' education; 115 received home visits (43 declined after recruitment).

Matching for pre-post analysis ( $n = 27$ ), students showed increased confidence in checking medications, identifying barriers, and assessing function/suitability of the home environment ( $3.57 \pm 0.55$  vs  $3.93 \pm 0.40$  [ $p < .05$ ]) and a non-significant increase in managing transition ( $3.59 \pm 0.48$  to  $3.79 \pm 0.34$  (scale 1–5)). The simplified discharge letters reflected acquisition of writing in plain language and adapting information to patients' needs. One hundred five medication discrepancies<sup>3</sup> were identified, involving 53 patients, with  $2.1 \pm 1.9$  discrepancies/patient, system-level errors (e.g., unclear discharge instructions) accounted for 33%, and patient-level factors (e.g., non-adherence) 67%. Student reports indicated 356 actions taken (mean 4.0/visit) (Table 1).

CTM-3 results ( $n = 114$ ) were initially high, with non-significant improvement in patients' understanding of managing health ( $3.14 \pm 0.90$  vs  $3.73 \pm 0.42$ ). Researcher-conducted phone interviews ( $n = 52$ ) showed patients appreciated students' commitment and attentiveness (Box 1) and found the visit helped their understanding of instructions, medications, and medical conditions. Ninety-six percent recommended that ETGAR should be regularly offered to patients.

<sup>1</sup>ETGAR—The Hebrew word for "challenge" is an acronym for literacy, support, and a bridge between medicine and society

**Table 1 Action Taken by Students During Home Visits (n = 356)**

Form of action taken at home visit	Number of actions (%)
Explained/organized medications	89 (25%)
Explained medical conditions	65 (18%)
Helped in making appointments with specialists	59 (17%)
Advised patient to see their family physician	56 (16%)
Helped with understanding and navigating community services such as linking to social security benefits	45 (13%)
Addressed accessibility issues in the home	30 (8%)
Advised re: health promotion, smoking, and lifestyle behaviors	12 (3%)

### Box 1 Examples of patients' and students' perceptions regarding the gains they made through participating in ETGAR

#### Patients:

##### a. *Patience and the willingness to answer questions*

"I would definitely recommend the program. It's an excellent thing. You know, in hospital, doctors and nurses work so hard, and do not have a lot of time. It is extremely important to have someone coming and answering your questions."

##### b. *Understanding medications*

"The visit was extremely beneficial. The students helped me clarify everything, especially the medications ... When they visited they noticed I had fluid in my lungs so they helped me contact my family physician immediately and he arrived while they were still there. They also helped me schedule an appointment and make sure it was at an earlier date"

#### Students:

##### a. *Important skills to their development as doctors*

"Over the course of the project I got to know the discharge letter in depth, I learned what a good and clear letter was and letters that required improvement ... I understood the importance of having another person present at the time of discharge, as patients who were discharged alone did not understand all the information, where as those who were with dear ones could explain later or expand upon. I am very happy I took part, I learned important things and I acquired a significant set of tools." (Student A, Age 25, F)

##### b. *Exposure to patients outside the confines of hospital*

"I think entering people's homes after hospitalization gave me the possibility to understand better the sort of problems that can arise the moment patients are no longer in hospital. I understood how treatment details are important for patients, especially for older patients who have difficulty navigating in the vast amount of text in which they leave hospital .... It was ... moving to experience patient care outside of a clinic, in a place where the patient is master of his autonomy and strength. How important it was to get a glimpse of what happens behind the scenes of medical instructions (Student B Age 29, M)

##### c. *Deeper understanding that medical care must extend beyond patients' medical problems*

The project opened me to a new world of medical care beyond medical treatment alone. The openness that developed between me and the patients I visited was profound and beautiful. I learned a great deal about them, and more so about myself and the doctor I want to become. ... Something I saw many times in the visit – patients who lost their will to invest in themselves, and perhaps I succeeded in giving them another small nudge of motivation." (Student C, Age 28, F)

## DISCUSSION

ETGAR offered students an opportunity to increase their understanding of underserved patients' needs through experiential community-based learning during hospital rotations. Students' confidence and skills relating to medication reconciliation, barriers to treatment adherence, simplifying medical texts, and complexities of medical jargon improved. Students perceived these as important for their toolbox as future physicians.

Patients saw ETGAR as beneficial and reported a better understanding of discharge instructions, medical conditions, and medication regimes, all central for reducing avoidable readmissions.<sup>6</sup> Challenges include patient drop-out, moderate response rate to phone interviews, and expanding ETGAR to a hospital-wide service due to students' time constraints.

In light of its success, ETGAR is now a compulsory course for all students during internal medicine, pediatrics, gynecology, and surgery rotations. In-depth sessions on medication reconciliation, discharge letters, and liaising with community/social services have been introduced through structured tutorials involving hospital tutors who contextualize the course to the ward and hospital setting. ETGAR is a potential model for incorporating issues of inequities and SDH into the curriculum while enhancing students' communication skills with disadvantaged patients. Research is underway to ascertain ETGAR's impact more fully.

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#### Compliance with Ethical Standards:

Approval was obtained through hospitals' ethics committees.

**Conflict of Interest:** The authors declare that they do not have a conflict of interest.

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