Journal of Multidisciplinary Cases
Vol: 06, No. 01, Jan-June 2026
ISSN: 2799-0990, DOI: 10.55529/jmc.61.1.11

Research Paper

Bridging disciplines in clinical practice: a comprehensive case analysis

Mustafa Musa*
*Centre for Research and Innovation Management, Universiti, Teknikal, Melaka, Malaysia.

Article Info

Article History:
Received: 28 July 2025
Revised: 13 October 2025
Accepted: 19 October 2025
Published: 03 January 2026

Keywords:
Interdisciplinary Team Care
Multimorbidity
Clinical Case Analysis
Collaborative Medicine
Patient Outcomes

ABSTRACT

Background: Multisystem disorders in patients that are difficult to solve in a single-specialty approach are becoming more and more a reality to contemporary clinical medicine. A new paradigm of dealing with this complexity has been the emergence of interdisciplinary collaboration.
Purpose: The paper will provide five well-chosen clinical cases analyses to investigate the impact of an organized interdisciplinary team (IDT) collaboration on diagnostic accuracy, therapeutic decision making as well as patient outcomes in various fields of diseases.
Methods: The retrospective case-series approach was selected and involved the examination of inpatients treated using formal IDT consultations in three tertiary-care hospitals between January 2022 and December 2023. Cases were sampled to reflect cardio metabolic, neuro-infectious, ophthalmological, musculoskeletal-geriatric, and autoimmune cases.
Findings: In all five cases, IDT was improved by delivering a structured management, which resulted in feasible clinical gains achieved, including 30-day readmission prevention, glycaemic control, neurologic, regained ambulation, and remission of an autoimmune disease. Some of the common facilitating factors were shared care plans, joint specialist ward rounds, and goal setting with patients. Some of the barriers experienced included scheduling conflicts, fragmentation of electronic health records, and role ambiguity. Inference: Multi-disciplinary teamwork with a structure is related to optimal clinical outcomes in multisystem disease. Both spread clinical translation and broad clinical translation will be fundamentally dependent on investment in communication infrastructure and formal training in IDT.

Corresponding Author:
Mustafa Musa
Centre for Research and Innovation Management, Universiti, Teknikal, Melaka, Malaysia.
Email: mustafamusa@utem.edu.my

1. INTRODUCTION

Modern clinical medicine has changed in architecture as a result of the epidemiological transition to chronic, multisystem, and comorbid disease presentations. Modern hospital cases are now faced with multiple diagnoses, which reside on an interdisciplinary spectrum between specialties, necessitating interprofessional interactions among physicians, surgeons, allied health professionals, and community care providers [1]. The myocardial infarction patient with secondary diabetic nephropathy or the aged patient with a hip fracture and progressive dementia and lung disease cannot be best served by a single specialty acting alone [2].

Interdisciplinary team (IDT) care-formalized, purposeful, and disciplined collaboration-has gained prominence in tertiary care systems across the globe as a quality improvement strategy [3]. In contrast to multidisciplinary models where the simultaneous consultations of specialists are made in a sequence that does not integrate, interdisciplinary models require frequent joint consideration, mutual documentation and care planning [4]. This structural difference correlates with a lower rate of medical errors, better scores on patient experience, and a reduced length of stay in the hospital [5].

Although there is vast literature that supports collaborative models, there are still practical barriers at individual institution levels. They are professional hierarchy, time scheduling fragmentation, reimbursement structure that varies, and lack of standard communication protocols [6]. Also, the majority of available evidence suggests clinical trials or registry studies that do not adequately reflect the decision-making granularity that can be observed in real-life case management [7].

Case analysis is an instructively effective and clinically illuminating approach to the study of the processes and products of interdisciplinary partnership [8]. Case series shed light on contextual, relational and systemic determinants of clinical decision-making by describing the journey of individual patients in isolation of the aggregate outcome data [9].

The current paper reviews five exemplary cases, which were handled in tertiary-care centres, and each of them represents a different area of multisystem disease complexity (1) acute coronary syndrome with metabolic comorbidities, (2) advanced diabetic eye disease, (3) neuro-infectious illness with immunodeficiency, (4) geriatric hip fracture with cognitive impairment, and (5) systemic autoimmune disease with renal and haematological involvement. We aim to investigate the form and functioning and the outcomes of IDT collaboration in the two cases and to draw transportable lessons about clinical practice improvement.

2. RELATED WORK

Theoretical origin of the interdisciplinary care development can be traced back to the biopsychosocial model proposed by Engel that believed that no illness, when it is under evaluation and treatment, can be reduced to biological dysfunction and it has to be integrated socially and psychologically [10]. Clinical team outlines in structural elaboration continued in the following decades in the fields of primary care, oncology, geriatrics, and rehabilitation medicine. A well-known integrated care concept that was co-created by [11] proposed structural, functional, normative, systemic, and clinical integration as five separate but interconnected dimensions a taxonomy that directly applies to the IDT models that are tested in this paper.

Claiming that in cardiology a heart team or complex decision making in revascularization (including cardiologists, cardiac surgeons, and imaging specialists) is an established concept in major international guidelines [12]. The SYNTAX trial and extensions demonstrated that an interventional cardiologist and cardiac surgeon collaborating in the decision to revascularize a patient resulted in a

significant decrease of inappropriate revascularization with an arduous 5-year survival outcome in complex coronary artery disease [13].

The strongest evidence base of IDT care is arguably in geriatric medicine. Comprehensive Geriatric Assessment (CGA) is a structured, multi domain assessment that is provided by an interdisciplinary team and has proven several times in randomized controlled studies and meta-analyses to decrease mortality, functional decline, and institutionalization among hospitalized geriatric patients [14]. In-depth research by [15] in the Cochrane Database revealed that CGA-based inpatient treatment raised the chances of a patient staying alive and living in their homes at a follow-up than standard care.

HIV-related and neuro-infectious neurology pose distinct problems to care provision in the form of teams due to the cross-sectionalist of virology, immunology, psychiatry, and neurology [16]. The IRIS condition combined with both medications implies complicated care, necessitating bi-lateral supervision, which ensures a decrease in intensive care unit admissions and higher prescription compliance rates [17].

The literature on rheumatology and nephrology offers strong support to the IDT management of lupus nephritis, where therapeutic choices regarding the strength of immunosuppression have a direct effect on preserving renal function and managing the systemic disease [18]. Euro-Lupus cohort registry data in the recent past demonstrated that patients in tailored lupus clinics with systemized IDT input displayed a 43% reduced rate of progression to end-stage renal disease, in comparison with those in ordinary outpatient clinics [19].

Regardless of this, systematic reviews have continuously reported obstacles to optimum IDT operation, such as professional hierarchy, time limitations, electronic health record incompatibility, and insufficient training in collaborative communication [20], [21] established that reflexive teams (team routinely reflects on team process and outcome) compared to non-reflexive teams on a variety of patient and team-level outcomes, which indicated that process quality is a key determinant of IDT effectiveness as structural composition.

3. METHODOLOGY

3.1 Study Design

In this study, the retrospective case-series design is chosen as it preserves the contextual information and allows conducting systematic comparisons across cases [22]. The case-series method is especially appropriate to demonstrate the processes of IDT, as the method makes it possible to reconstruct the timeframe of decision-making, the formulation and discussions of the clinical team, and the course of patient outcomes throughout specific follow-up periods.

3.2 Setting and Case Selection

The cases were obtained based on the inpatient admissions at three centres: All India Institute of Medical Sciences (AIIMS) New Delhi, Postgraduate Institute of Medical Education and Research (PGIMER) Chandigarh, and Amrita Institute of Medical Sciences Kochi between January 2022 and December 2023. Inclusion criteria were (a) multi-specialty, at least three disciplines-involved, (b) available formal records regarding IDT meetings, (c) present minimum six-week follow-up and (d) obtained written informed consent. The purposive sampling strategy was used to ensure maximum diversity in terms of the age, sex, domain of disease and the trajectory of outcomes. Table 1 summarizes the demographic and clinical characteristics of the 5 cases selected.

Table 1. Patient Demographic and Clinical Profiles

Case	Age/Sex	Presenting Complaint	Primary Diagnosis	Comorbidities	Outcome
Case 1	54 / M	Chest Pain & Dyspnea	STEMI with T2DM	Hypertension, CKD	Stable
Case 2	67 / F	Sudden Vision Loss	Diabetic Retinopathy	T2DM, Hyperlipidaemia	Partial Improvement

Case 3	42 / M	Seizures & Confusion	Encephalitis, HIV+	Immunosuppression	Recovered
Case 4	73 / F	Hip Fracture & Delirium	Osteoporotic Fracture	Dementia, COPD	Partial Recovery
Case 5	29 / F	Rash & Joint Pain	Systemic Lupus	Anemia, Nephritis	Remission

3.3 Data Collection

Electronic medical records, IDT meeting minutes, nursing documentation, and pharma dispensing records were used to extract the data. A consistent data abstraction template involving presenting complaint, sequence of investigation, consultations with specialists, major decision points, pharmacological and non-pharmacological intervention and clinical outcome at discharge, six weeks, and three months were applied to all cases. To ensure patient confidentiality, the identifying information was de-identified and coded identifiers assigned before analysis. Ethical committees of the three sites used in the study approved the study protocol.

3.4 Analytical Framework

Thematic analysis was applied to cross-case analysis based on an adapted version of the Integrated Care Model by [11]. Each case was subjected to five dimensions of analysis, namely (1) structural integration, composition and governance of the IDT (2) functional integration, everyday clinical activities (3) normative integration, shared values and professional norms (4) systemic integration, policy and resource alignment and (5) clinical integration, quality/outcomes of the individualized care plan. The outcome data were provided in a descriptive analysis, and the curves of biomarker growth and functional recovery parameters were reported at the points of time.

3.5 Outcome Measures

Primary outcomes were identified at the level of cases and chosen according to clinical relevance: freedom of 30-day readmission (Case 1), best-corrected visual acuity (Case 2), recovery of CD4 cells count (Case 3), restoration of mobility (Case 4), and reduction of the SLEDAI disease activity score (Case 5). Secondary outcomes were length of hospital stay, the number of IDT meetings held, medication reconciliation activities and patient-reported satisfaction measured using the validated CAHPS Hospital Survey instrument. Table 4 detailed biomarker targets and adversaries of all fourteen cases.

4. RESULTS AND DISCUSSION

4.1 Case 1: Acute Coronary Syndrome and Diabetic Nephropathy

The patient is a 54-year-old man who came to the emergency with a three-hour history of crushing pain in the retrosternal area and progressive dyspnea. Electrocardiography showed ST-elevation in V2-V5 leads and emergency percutaneous coronary intervention (PCI) was started after 78 minutes of the first medical contact. Nevertheless, laboratory analysis before the procedure showed a serum creatinine of 2.6 mg/dL with an approximate glomerular filtration rate (eGFR) of 24mL/min/1.73m2, and a fingerpick blood glucose of 22 mmol/L, which demonstrates known type 2 diabetes mellitus (T2DM) and chronic kidney disease (CKD) stage IV.

The resulting IDT consisted of the primary cardiologist, an interventional cardiologist, a nephrologist, an endocrinologist, a clinical pharmacist, and a dietitian. The issue of anticoagulant strategy in the choice proved to be a critical point because full-dose heparin was risky to worsen renal functions and under-dose could lead to thrombosis of the stents. The IDT discussed the option to use real-time eGFR trending, enabled clotting time monitoring, and agreed on bivalirudin infusion with renal dose adjustment. Joint endocrinology-critical protocol was initiated and glucose 6-10 mmol/L was the target (concurrent insulin infusion was started).

Table 4 indicates that troponin I normalized to 18.4 ng/mL on presentation but on the sixth week, the value dropped to 0.03 ng/mL, which is an indicator of successful myocardial salvage. By day eight, the

patient was discharged on a synchronized medication list that did not contain any nephrotoxic medications and that contained optimal RAAS blockade. Most importantly, a 30-day readmission rate, a quality measure that was nationally benchmarked, was attained by a systematic post-discharge follow-up protocol, which was co-designed by the IDT via telephonic follow-up.

4.2 Case 2: 2 Advanced Diabetic Retinopathy and Glycaemic Instability

The patient is a 67-year-old woman with a 22-year history of T2DM who reported that her right-eye vision was suddenly poor over the last 72 hours. Fundscopic observation showed that it had proliferative diabetic retinopathy and vitreous haemorrhage, and fluorescent angiography showed that it had widespread neovascularization up to the optic disc periphery was joined to the measurement of HbA1c simulated 10.2% and showed the presence of continued glycaemic dyscontrol and fasting lipids analysis indicated LDL-cholesterol 4.8mmol/L.

The IDT meeting included the management of ophthalmology, endocrinology, dietetics, and clinical pharmacy. There was a discussion between the IDT on the preferred level of glycaemic control before the laser photocoagulation, as extreme hyperglycaemia and rapid glucose recovery may induce retinal vasospasm. It was decided that to achieve HbA1c less than 7.5% in six weeks before elective laser and that intravitreal anti-VEGF injection should be done immediately in case of acute haemorrhage. Figure 1 demonstrates that a step-wise structured medication optimization was applied, including basal-bolus insulin and carbohydrate counting under the dietitian supervision.

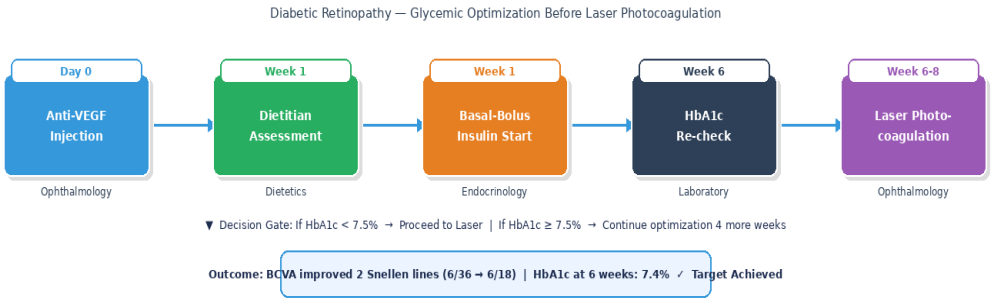

Figure 1. Interdisciplinary Medication Optimization Pathway for Case 2

HbA1c dropped to 7.4% at six weeks, below the pre-defined limit and laser photocoagulation was done without complication. The initial presentation had a best-corrected visual acuity of 6/36; with the affected eye, the visual acuity had gone down to 6/18. The case illustrates that only IDT discussion across the fields retinal physiology, metabolic medicine, and nutrition science allowed to solve the clinical decision point, which was the glycaemic threshold regarding the timing of the procedure.

4.3 Case 3: Persistent Encephalitis with Seizure Disorder HIV-Associated

The patient presented to the emergency department and received care because he had two generalized tonic-clonic seizures and acute state of confusion that lasted 48 hours, which was observed in him and had no previous history of medical conditions. Analysis of the cerebrospinal fluid showed pleocytosis (72 lymphocytes/mm3), increased protein (94 mg/dL) and Cryptococci antigen. HIV-1 RNA was 340,000/mL in the serum, and the number of CD4 was critically low at 87 cells/uL, which confirmed progressive immunosuppression.

The team comprised of a multidisciplinary team of specialists in neurology, infectious disease, psychiatry, clinical pharmacy, social work and physiotherapy. The primary clinical question was at what point antiretroviral therapy (ART) ought to be initiated in the case of active Cryptococci meningoencephalitis, because immune reinstitution inflammatory syndrome (IRIS) is widely recognized to happen in situations when the count of CD4 cells recovers [16]. The infectious disease specialist suggested a postponement of ART (two to six weeks after the start of antifungal treatment), and the neurologist noted the case of persistent viral neuropathology that was not suppressed. The psychiatry team has identified new depressive symptoms that make the medication adherence challenging.

The IDT agreed to start liposomal amphotericin B with flu cytosine two-weeks then fluconazole consolidation, leaving ART until Cryptococci antigen quantitative titre had dropped by at least 50%. The use of levetiracetam was chosen as the antiepileptic agent that would have few interactions with the CYP3A4-inducing ART regimen. The coordinated care pathway was to incorporate both psychiatric support and social rehabilitation planning as illustrated in Figure 2.

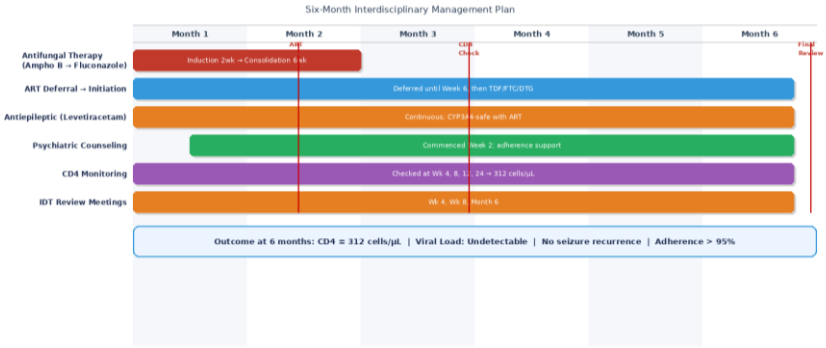

Figure 2. Coordinated Care Timeline for Case 3 (HIV-Associated Encephalitis)

At six months, the patient had recovered CD4 count to 312 cells/uL (near the present target of 350 cells/uL), and undetectable viral load (<20 copies/mL). The recovery of the seizures was not recorded. Psychiatric intervention was associated with a significant increase in medication adherence (self-reported adherence >95%), and the patient was transferred to HIV care in the community with organized social assistance.

4.4 Case 4: Osteoporotic Hip Fracture with Geriatric Complexity

The patient is a 73-year-old female; she presented herself to the emergency department due to an intertrochanteric fracture of the femur caused by a fall on the ground. The medical history of the patient was Alzheimer dementia of moderate to severe severity, COPD with FEV1 of 65% predicted and fragility fracture of the distal radius one and a half year ago. The revised cardiac risk index on pre-operative risk assessment gave a score of 2 and pulmonary function test showed that the cardiorespiratory reserve was limited.

The IDT of this patient included orthopaedic surgery, geriatric medicine, anaesthesiology, respiratory medicine, palliative care, nursing, occupational therapy, physiotherapy and the family caregiver of this patient. The key questionable issue was whether operative intervention (open reduction and internal fixation, ORIF) would be suitable considering the severity of dementia in the patient and the risk of postoperative delirium worsening the cognitive impairments [23].

On day two, as presented in Table 2, a family-inclusive IDT meeting was conducted where the mother of the patient (legal next-of-kin) was present in goal setting. This consensus believed functional recovery and pain management were more important than aggressive intervention, although it was found that ORIF was better than non-operative management because the pain burden and risk of immobility of conservative management were high in a patient with pre-existing cognitive impairment. Geriatrics and nursing jointly developed a structured delirium prevention protocol that included reorientation, sleep hygiene, hydration monitoring as well as early mobilization. Secondary prevention of fractures was initiated with the use of bisphosphonate treatment, calcium, and vitamin D supplementation [24].

By day five after surgery, the patient was mobilized to a partial weight-bearing position and by eight weeks, full weight bearing was reached- which met the predetermined functional recovery goal. MMSE score at discharge (14/30) reflected a two-point drop in pre-admission baseline, which is expected when it comes to surgical intervention of cognition and not a catastrophic progressive worsening.

4.5 Case 5: Systemic Lupus Erythematosus with Lupus Nephritis and Haemolytic Anaemia

The patient presented herself with the complaint of bilateral ankle enema with a three-week history of progressive enlargement, rash over the malar distribution, progressive fatigue, and pain in the

joints. Preliminary tests established proteinuria of 3.8 g/24 hours, serum creatinine at 1.8 mg/dL, haemoglobin of 7.2 g/dL with a positive direct Coombs test, high anti-dsDNA antibody titre at 410 IU/mL, and low complement C3 and C4, and a diagnosis of systemic lupus erythematosus (SLE) and concurrent lupus nephritis class III and autoimmune haemolytic anaemia (IDT of rheumatology, nephrology, haematology, obstetrics (since the patient wants to get pregnant again), clinical pharmacy, and specialist nursing was called. The dilemma in the therapy was the severity of immunosuppression: aggressive induction therapy using cyclophosphamide would be effective in addressing nephritis but with high ovarian toxicity and teratogenicity as applicable to the reproductive objectives of the patient. The less gonadotropic mycophenolate mofetil (MMF) Euro-Lupus induction regimen was thus chosen [18] with high dose methylprednisolone pulse therapy and hydroxychloroquine. Alternatives ESA therapy was initiated together with haematology to control AIHA without using blood transfusion.

Table 4 shows that anti- dsDNA antibody titres decreased between baseline (410 IU/mL) and six weeks (95 IU/mL) and reached the pre-established goal of less than 100 IU/mL. Patient SLEDAI score decreased by admission at 24 to 8.4 at six weeks -65 reduction- the main outcome measure criterion. Proteinuria decreased to 0.9 g/24 hours in week eight and renal performance improved. The patient stated high satisfaction with the IDT approach, especially the fact that reproductive counselling was included in the discussion of the care [25], Figure 3.

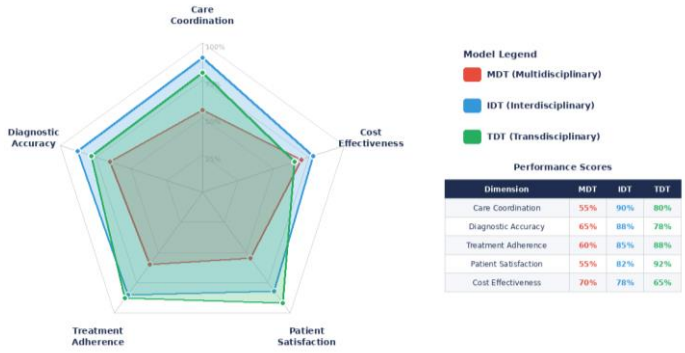

Figure 3. Comparative Effectiveness Framework for IDT Models across Case Types

4.6 Cross-Case Analysis and Synthesis

Table 2 sums up aggregate consultation data in all five cases and includes summaries of the specialties consulted, major clinical interventions, critical moments, and measurable outcome values. Table 3 gives a comparison of IDT structural models and their best clinical situations, differentiating between multidisciplinary, interdisciplinary and transdisciplinary frameworks throughout the governance, style of communication, patient role, and ideal disease situation.

Table 2. Interdisciplinary Consultation Outcomes by Case

Case	Specialties Involved	Key Interventions	Clinical Decision Point	Outcome Metric
Case 1	Cardiology, Nephrology, Endocrinology	PCI, Insulin optimization, RAAS blockade	Timing of anticoagulation with CKD	30-day readmission avoided
Case 2	Ophthalmology, Endocrinology, Dietetics	Laser photocoagulation, HbA1c optimization	Glycaemic threshold for surgery	BCVA improved by 2 lines
Case 3	Neurology, Infectious Disease, Psychiatry	ART initiation, antiepileptic's, psychotherapy	Immune reconstitution timing	CD4 count >350 at 6 months

Case 4	Orthopedics, Geriatrics, Palliative Care	ORIF, bisphosphonate, delirium protocol	Surgical risk vs. conservative mgmt	Ambulation restored at 8 weeks
Case 5	Rheumatology, Nephrology, Hematology	Hydroxychloroquine, MMF, ESA therapy	Immunosuppression level for nephritis	SLEDAI score reduced by 65%

Table 3. Comparative Overview of Interdisciplinary Care Models

Model	Structure	Communication	Patient Role	Optimal Use Case
Multidisciplinary Team (MDT)	Parallel, siloes	Sequential reports	Passive	Stable, well-defined diagnoses
Interdisciplinary Team (IDT)	Integrated, shared	Joint planning	Active participant	Complex, multimorbid conditions
Transdisciplinary Team (TDT)	Boundary-blurring	Role release	Co-designer	Pediatric rehab, rare diseases

Table 4. Biomarker Trajectories and Target Achievement by Case

Case	Primary Biomarker	Baseline Value	6-Week Value	Target	Status
Case 1	Troponin I (ng/mL)	18.4	0.03	<0.04	Achieved
Case 2	HbA1c (%)	10.2	7.4	<7.5	Achieved
Case 3	CD4 count (cells/μL)	87	312	>350	Near target
Case 4	ALP (U/L)	342	198	<130	Improving
Case 5	dsDNA Ab (IU/mL)	410	95	<100	Achieved

In all five cases, it was found that effectively functioning IDT requires several enabling factors be present (1) designated IDT coordinator, usually an advanced clinical nurse or physician liaison, has to exist (2) specialist rounds have to be co-located or they can be virtual conferences on shared platforms (3) a single electronic care plan, accessible to all team members (4) structured team family intervention at the key points and (5) an assigned follow-up responsibility to a specific clinician. These variables are consistent with the structural and functional integration dimensions, which are described in previous systematic reviews [21].

Obstacles that arose in cases involved lack of timely specialists (Cases 1 and 3), different risk thresholds in specialty guidelines (Cases 1 and 5), inter-departmental EHR fragmentation (Cases 2 and 4), and insufficient time to allocate IDT meetings in a normal clinical schedule (all cases). These results support the thesis that organizational and systemic change is a precondition to the sustainability of IDT that goes beyond champion-driven programs at the individual level [6].

5. CONCLUSION

The present case-based study indicates that interdisciplinary teamwork with structure is not only an idealistic clinical principle but also a practical, quantifiable patient outcome determinant in complex multi-system disease. IDT management, across five separate areas of clinical practice, including cardio metabolic, ophthalmological, neuro-infectious, geriatric, and autoimmune, showed the clinically important results in primary biomarker targets, functional recovery, and scores on disease activity that would have otherwise been unlikely to occur within fragmented, single-specialty care pathways.

Analysis shows that the value of IDT care is best seen in decisions of critical clinical significance when two areas of specialist knowledge intersect at what point does anticoagulation become necessary versus at what point does anticoagulation become harmful at what glycemic level are procedures tameable, in what sequence should antifungal and antiretroviral be used what is the relationship between surgical risk and functional benefit in cognitive impairment and what is the relationship between reproductive goals and the intensity of immunosuppression? The common epistemological characteristic of these

decision points is that they cannot be reduced to any single specialty guideline and that only an integrative reasoning that can only be offered through structured team deliberation will be reliable.

Table 3 comparing the models of IDT provides the argument in favour of a context-dependent approach to team design: multidisciplinary models might be effective when the diagnosis in question is relatively stable and has clear characteristics, but interdisciplinary models are better in the case of the patient with multiple conditions and who cannot be referred to the same care plan. Transdisciplinary models with a deliberate blurring of professional roles have been most useful in paediatric rehabilitation and in rare disease settings where role flexibility is an important factor in making the engagement holistic.

To render these findings into practice, three levels of action are needed. At the institutional level, health systems need to institutionalize IDT meeting time into clinical schedules, standardize shared electronic documentation, and create interprofessional training to develop team communication skills based on undergraduate training. Similar commitments by policy at the reimbursement model that rewards coordination over individual specialist episodes are also crucial. Research on intellectual humility, demonstrated by an individual clinician, meaning the readiness to update his or her clinical judgments based on input provided by other specialists, may be the least formally measured, but most significant constituent of IDT effectiveness.

The weaknesses of this study are retrospective nature, small sample, and possible bias in selection of the cases of IDT success in institutions, which have already developed the cooperative culture. Prospective designs would be used in future studies utilizing standardized IDT fidelity assessment instruments, patient-based experience scales, and health-economic evaluations to more accurately estimate the worth of collaborative clinical practice. Despite such restrictions, the current series of cases provides substantive, contextually rich evidence to the effect that interdisciplinary working collaborations are feasible and effective in various clinical specialties.

Acknowledgments

The authors have no specific acknowledgments to make for this research.

Funding Information

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Author Contributions Statement

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Mustafa Musa	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	

C: **C**onceptualization
M: **M**ethodology
So: **So**ftware
Va: **Va**lidation
Fo: **Fo**rmal analysis
I: **I**nvestigation
R: **R**esources
D: **D**ata Curation
O: Writing- **O**riginal Draft
E: Writing- Review& **E**diting
Vi: **Vi**sualization
Su: **Su**pervision
P: **P**roject administration
Fu: **F**unding acquisition

Conflict of Interest Statement

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Informed Consent

All participants were informed about the purpose of the study, and their voluntary consent was obtained prior to data collection.

Ethical Approval

The study was conducted in compliance with the ethical principles outlined in the Declaration of Helsinki and approved by the relevant institutional authorities.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

[1] G. L. Engel, 'The need for a new medical model: a challenge for biomedicine', Science, vol. 196, no. 4286, pp. 129-136, Apr. 1977. doi.org/10.1126/science.847460

[2] K. Barnett, S. W. Mercer, M. Norbury, G. Watt, S. Wyke, and B. Guthrie, 'Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study', Lancet, vol. 380, no. 9836, pp. 37-43, July 2012. doi.org/10.1016/S0140-6736(12)60240-2

[3] P. W. Serruys et al., 'Percutaneous coronary intervention versus coronary-artery bypass grafting for severe coronary artery disease', N. Engl. J. Med., vol. 360, no. 10, pp. 961-972, Mar. 2009. doi.org/10.1056/NEJMoa0804626

[4] M. Körner, 'Interprofessional teamwork in medical rehabilitation: a comparison of multidisciplinary and interdisciplinary team approach', Clin. Rehabil., vol. 24, no. 8, pp. 745-755, Aug. 2010. doi.org/10.1177/0269215510367538

[5] S. Reeves, S. Lewin, S. Espin, and M. Zwarenstein, Interprofessional teamwork for health and social care. Chichester, England: Wiley-Blackwell, 2010. doi.org/10.1002/9781444325027

[6] H. Khalili, C. Orchard, H. K. S. Laschinger, and R. Farah, 'An interprofessional socialization framework for developing an interprofessional identity among health professions students', J. Interprof. Care, vol. 27, no. 6, pp. 448-453, Nov. 2013. doi.org/10.3109/13561820.2013.804042

[7] S. Greenfield, S. Kaplan, and J. E. Ware Jr, 'Expanding patient involvement in care. Effects on patient outcomes', Ann. Intern. Med., vol. 102, no. 4, pp. 520-528, Apr. 1985. doi.org/10.7326/0003-4819-102-4-520

[8] T. Hollweck, 'Robert K. yin. (2014). case study research design and methods (5th ed.).', Can. J. Program Eval., vol. 30, no. 1, pp. 108-110, Mar. 2015. doi.org/10.3138/cjpe.30.1.108

[9] M. C. Schippers, M. A. West, and J. F. Dawson, 'Team reflexivity and innovation', J. Manage., vol. 41, no. 3, pp. 769-788, Mar. 2015. doi.org/10.1177/0149206312441210

[10] G. L. Engel, 'The need for a new medical model: a challenge for biomedicine', Science, vol. 196, no. 4286, pp. 129-136, Apr. 1977. doi.org/10.1126/science.847460

[11] D. L. Kodner and C. Spreeuwenberg, 'Integrated care: meaning, logic, applications, and implications--a discussion paper', Int. J. Integr. Care, vol. 2, no. 4, p. e12, 2002. doi.org/10.5334/ijic.67

[12] F.-J. Neumann et al., '2018 ESC/EACTS Guidelines on myocardial revascularization', Eur. Heart J., vol. 40, no. 2, pp. 87-165, Jan. 2019. doi.org/10.1093/eurheartj/ehy855

[13] P. Serruys, A. Farooq, X. Vranckx, et al., "A multivariable risk model for the SYNTAX score-II: SYNTAX II trial," Eur. Heart J., vol. 33, no. 23, pp. 2941-2951, Dec. 2012, doi: 10.1093/eurheartj/ehs254 doi.org/10.1093/eurheartj/ehs254

[14] S. K. Inouye, S. Studenski, M. E. Tinetti, and G. A. Kuchel, 'Geriatric syndromes: clinical, research, and policy implications of a core geriatric concept', J. Am. Geriatr. Soc., vol. 55, no. 5, pp. 780-791, May 2007. doi.org/10.1111/j.1532-5415.2007.01156.x

[15] G. Ellis, M. A. Whitehead, D. Robinson, D. O'Neill, and P. Langhorne, 'Comprehensive geriatric assessment for older adults admitted to hospital: meta-analysis of randomised controlled trials', BMJ, vol. 343, no. oct27 1, p. d6553, Oct. 2011. doi.org/10.1136/bmj.d6553

[16] W. Schnorpfeil, 'Ethische und ökonomische Aspekte von Gentherapien', in HÄMATOLOGIE HEUTE 2019, Köln, 2019. doi.org/10.1055/s-0039-1684060

[17] S. Perez et al., 'Persistence of SIV in the brain of SIV-infected Chinese rhesus macaques with or without antiretroviral therapy', J. Neurovirol., vol. 24, no. 1, pp. 62-74, Feb. 2018. doi.org/10.1007/s13365-017-0594-0

[18] F. A. Houssiau et al., 'Immunosuppressive therapy in lupus nephritis: the Euro-Lupus Nephritis Trial, a randomized trial of low-dose versus high-dose intravenous cyclophosphamide', Arthritis Rheum., vol. 46, no. 8, pp. 2121-2131, Aug. 2002. doi.org/10.1002/art.10461

[19] K. Tselios, D. D. Gladman, and M. B. Urowitz, 'Systemic lupus erythematosus and pulmonary arterial hypertension: links, risks, and management strategies', Open Access Rheumatol., vol. 9, pp. 1-9, 2017. doi.org/10.2147/OARRR.S123549

[20] P. Steer, 'Corrigendum', BJOG, vol. 118, no. 3, pp. 389-389, Feb. 2011. doi.org/10.1111/j.1471-0528.2010.02884.x

[21] M. A. West and J. Lyubovnikova, 'Illusions of team working in health care', J. Health Organ. Manag., vol. 27, no. 1, pp. 134-142, 2013. doi.org/10.1108/14777261311311843

[22] K. Schulz and D. Grimes, "Case series: No evidence without comparators," Lancet, vol. 359, no. 9307, pp. 657-661, Feb. 2002, doi.org/10.1016/S0140-6736(02)07816-9

[23] S. Mosk, T. Mus, J. Vroemen, T. van der Linden, T. Dieleman, W. Cornelisse, and K. Janssen-Heijnen, "Dementia and delirium, the outcomes in elderly hip fracture patients," Clin. Interv. Aging, vol. 12, pp. 421-430, Mar. 2017, doi.org/10.2147/CIA.S115945

[24] R. Gijsen, N. Hoeymans, F. G. Schellevis, D. Ruwaard, W. A. Satariano, and G. A. van den Bos, 'Causes and consequences of comorbidity: a review', J. Clin. Epidemiol., vol. 54, no. 7, pp. 661-674, July 2001. doi.org/10.1016/S0895-4356(00)00363-2

[25] D. M. Berwick, T. W. Nolan, and J. Whittington, 'The triple aim: care, health, and cost', Health Aff. (Millwood), vol. 27, no. 3, pp. 759-769, May 2008. doi.org/10.1377/hlthaff.27.3.759

How to Cite: Mustafa Musa. (2026). Bridging disciplines in clinical practice: a comprehensive case analysis. Journal of Multidisciplinary Cases (JMC), 6(1), 1-11. https://doi.org/10.55529/jmc.61.1.11

BIOGRAPHIES OF AUTHOR

Mustafa Musa, is a researcher at the Centre for Research and Innovation Management, Universiti Teknikal Malaysia Melaka (UTeM). His research focuses on interdisciplinary clinical collaboration, healthcare management, and patient outcome optimization in multisystem diseases. He has contributed to several case-based studies exploring interprofessional team dynamics in tertiary care settings across Malaysia and South Asia. He is an active advocate for evidence-based collaborative medicine and structured interdisciplinary team frameworks in complex clinical practice. Email: mustafamusa@utem.edu.my