

Lesiones y patologías de la facultad de farmacia de la Universidad de Salamanca. Paula García Santos / Evaluación de la efectividad de la Atención Farmacéutica en pacientes tratados con fórmulas magistrales en el periodo de septiembre 2017 - febrero 2018 en Farmacia Magistral de Villanueva de la Serena (Badajoz). Sandra Avis; Francisco Luis Pérez Higuero; Rosa M.^a Vicente / Incorporación de agentes anti-infecciosos en nanopartículas metálicas de oro y quitosan. Salomé Díaz Sánchez; José Martínez Lanao; Clara Isabel Colino Gandarillas / Atención farmacéutica en gripe y resfriado en una farmacia comunitaria de Zamora capital en los meses de septiembre a febrero. Eva Fernández Rodríguez; Tomás Codesal Gervás / Comunidades microbianas que viven en simbiosis con el ser humano. Beneficios en terapéutica de patologías menores. Prácticas tuteladas, febrero-julio 2017. Ana M. Olleros Anaya; Cristanto Martín Martín / Relación rosácea y *Demodex folliculorum*. Natalia Pérez Machado; Fernando Simón Martín; Mónica Roncero Riesco / Efectividad de la Atención Farmacéutica en pacientes hipertensos en una oficina de farmacia de Villanueva de la Serena (Badajoz). Rosa María Suárez Chamizo; Francisco Luis Pérez Higuero; Raquel Álvarez Lozano / Intervención farmacéutica ante la demanda y dispensación de antibióticos en una farmacia comunitaria. Marina Codesal Fidalgo; Ana María Martín Suárez; Tomás Codesal Gervás / Microbiótica: las bacterias como elementos imprescindibles para nuestra salud. Juan Manuel Igea Aznar / Managing Projects in the Health World. A J Wright BSC MSC PHG RPP MIO FAPM / Lesiones y patologías de la facultad de farmacia de la Universidad de Salamanca. Paula García Santos / Evaluación de la efectividad de la Atención Farmacéutica en pacientes tratados con fórmulas magistrales en el periodo de septiembre 2017 - febrero 2018 en Farmacia Magistral de Villanueva de la Serena (Badajoz). Sandra Avis; Francisco Luis Pérez Higuero; Rosa M.^a Vicente / Incorporación de agentes anti-infecciosos en nanopartículas metálicas de oro y quitosan. Salomé Díaz Sánchez; José Martínez Lanao; Clara Isabel Colino Gandarillas / Atención farmacéutica en gripe y resfriado en una farmacia comunitaria de Zamora capital en los meses de septiembre a febrero. Eva Fernández Rodríguez; Tomás Codesal Gervás / Comunidades microbianas que viven en simbiosis con el ser humano. Beneficios en terapéutica de patologías menores. Prácticas tuteladas, febrero-julio 2017. Ana M. Olleros Anaya; Cristanto Martín Martín / Relación rosácea y *Demodex folliculorum*. Natalia Pérez Machado; Fernando Simón Martín; Mónica Roncero Riesco / Efectividad de la Atención Farmacéutica en pacientes hipertensos en una oficina de farmacia de Villanueva de la Serena (Badajoz). Rosa María Suárez Chamizo; Francisco Luis Pérez Higuero; Raquel Álvarez Lozano / Intervención farmacéutica ante la demanda y dispensación de antibióticos en una farmacia comunitaria. Marina Codesal Fidalgo; Ana María Martín Suárez; Tomás Codesal Gervás / Microbiótica: las bacterias como elementos imprescindibles para nuestra salud. Juan Manuel Igea Aznar / Managing Projects in the Health World. A J Wright BSC MSC PHG RPP MIO FAPM / Lesiones y patologías de la facultad de farmacia de la Universidad de Salamanca. Paula García Santos / Evaluación de la efectividad de la Atención Farmacéutica en pacientes tratados con fórmulas magistrales en el periodo de septiembre 2017 - febrero 2018 en Farmacia Magistral de Villanueva de la Serena (Badajoz). Sandra Avis; Francisco Luis Pérez Higuero; Rosa M.^a Vicente / Incorporación de agentes anti-infecciosos en nanopartículas metálicas de oro y quitosan. Salomé Díaz Sánchez; José Martínez Lanao; Clara Isabel Colino Gandarillas / Atención farmacéutica en gripe y resfriado en una farmacia comunitaria de Zamora capital en los meses de septiembre a febrero. Eva Fernández Rodríguez; Tomás Codesal Gervás / Comunidades microbianas que viven en simbiosis con el ser humano. Beneficios en terapéutica de patologías menores. Prácticas tuteladas, febrero-julio 2017. Ana M. Olleros Anaya; Cristanto Martín Martín



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GARCÍA SANTOS, PAULA

LESIONES Y PATOLOGÍAS DE LA FACULTAD DE FARMACIA DE LA UNIVERSIDAD DE SALAMANCA
FarmaJournal, 2018, vol. 3, núm. 2, pp. 21-41

RESUMEN: El edificio de la facultad de Farmacia, diseñado por Julio Cano Lasso e Ignacio Mendaro, es considerado una obra reseñable dentro de la arquitectura racionalista del panorama español; sin embargo, de un tiempo a esta parte, su deterioro ha quedado en evidencia para todos aquellos que desarrollan allí sus actividades diarias.

Este trabajo se centra en analizar, clasificar y evaluar el origen de las patologías detectadas, permitiendo conocer la gravedad de las afecciones actuales y previniendo la aparición de lesiones futuras. La identificación de las patologías se realizó a partir de la observación y recogida de datos *in situ* y su catalogación de acuerdo con las premisas establecidas por el Colegio de Arquitectos de Madrid en temas de rehabilitación (tipología, orientación, nivel de exposición...).

Los resultados obtenidos permiten concluir que las patologías consideradas más relevantes se localizan en las fachadas con mayor exposición a la luz del sol (sur-este), discurren en vertical y/o han sido ocasionadas por causas directas, entre las que destaca la humedad. Si bien la mayoría no comprometen la seguridad de los individuos, sí ocasionan problemas de salubridad y confort, que pueden dificultar el desarrollo normal de las actividades para las que fue concebido el edificio.

Palabras clave: Facultad de Farmacia; arquitectura; lesiones constructivas; estudio técnico; rehabilitación de la edificación.

AVÍS, SANDRA; PÉREZ HIGUERO, FRANCISCO LUIS; VICENTE, ROSA M.^a

EVALUACIÓN DE LA EFECTIVIDAD DE LA ATENCIÓN FARMACÉUTICA EN PACIENTES TRATADOS CON FÓRMULAS MAGISTRALES EN EL PERÍODO DE SEPTIEMBRE 2017 - FEBRERO 2018 EN FARMACIA MAGISTRAL DE VILLANUEVA DE LA SERENA (BADAJOZ)
FarmaJournal, 2018, vol. 3, núm. 2, pp. 43-52

RESUMEN: Las Fórmulas Magistrales (FM) posibilitan la personalización de los tratamientos adaptándolos a las particularidades de cada paciente. A pesar de ello,

las dispensaciones de FM representan un porcentaje ínfimo con respecto al resto de dispensaciones.

La relación entre FM y Atención Farmacéutica (AF) es un campo muy poco explorado, es más, no existe en la bibliografía revisada ningún estudio con pacientes, pese a que la propia individualización de la farmacoterapia ya lleva implícita la necesidad de llevar a cabo una particular atención y cuyo objetivo final es optimizar los resultados terapéuticos del paciente, incrementando la efectividad, seguridad y adherencia de los tratamientos.

Cuando se prescribe una FM, el farmacéutico debe comprobar que es necesaria, efectiva y segura para ese paciente en concreto. Si algo no es correcto, el farmacéutico actuará de la misma manera que con cualquier otro medicamento al hacer el seguimiento fármaco-terapéutico (SFT) del paciente, realizando, por tanto, AF.

Los objetivos de trabajo son realizar un estudio observacional retrospectivo de la FM en las oficinas de farmacia de la provincia de Badajoz así como evaluar la efectividad de la AF en pacientes tratados con FM.

Palabras clave: Fórmulas Magistrales; Atención Farmacéutica; Seguimiento fármaco-terapéutico.

DÍAZ SÁNCHEZ, SALOMÉ; MARTÍNEZ LANAO, JOSÉ; COLINO GANDARILLAS, CLARA ISABEL
INCORPORACIÓN DE AGENTES ANTI-INFECCIOSOS EN NANOPARTÍCULAS METÁLICAS DE ORO Y CHITOSAN

FarmaJournal, 2018, vol. 3, núm. 2, pp. 53-61

RESUMEN: La resistencia a agentes antimicrobianos es un grave problema de salud, que provoca una gran mortalidad en la población. Por ello, hay un gran interés en la búsqueda de alternativas para el tratamiento de estas infecciones provocadas por bacterias multirresistentes. Una de ellas podría ser el uso de nanopartículas metálicas de oro (NPs) incorporando un agente anti-infeccioso como el ciprofloxacino, que es un fármaco antibacteriano de amplio espectro de acción. Por ello, el objetivo del estudio fue evaluar el comportamiento de las NPs de oro-chitosan (Au-chitosan) respecto a las de oro-citrato (Au-citrato) en la captación de ciprofloxacino para distintas condiciones de incubación. Para ello, se sintetizaron las NPs y se pusieron en contacto con el agente anti-infeccioso a distintas concentraciones de estudio. Mediante cromatografía líquida de ultra-alta eficacia (UHPLC), se estimaron las concentraciones de ciprofloxacino incorporadas a las nanopartículas. El porcentaje de incorporación de ciprofloxacino fue mayor para las nanopartículas de Au-citrato que para las nanopartículas de Au-chitosan. Sin embargo, las NPs de Au-citrato presentan el inconveniente de que se forman grandes agregados que dificultan su manejo. Las de Au-chitosan son más estables y además el chitosan posee actividad antibacteriana. Por ello, podrían ser un buen vehículo para la incorporación de agentes anti-infecciosos e incluso potenciar la actividad antimicrobiana del mismo.

Palabras clave: nanopartículas; ciprofloxacino; chitosan.

FERNÁNDEZ RODRÍGUEZ, EVA; CODESAL GERVÁS, TOMÁS

ATENCIÓN FARMACÉUTICA EN GRIPE Y RESFRIADO EN UNA FARMACIA COMUNITARIA DE ZAMORA CAPITAL EN LOS MESES DE SEPTIEMBRE A FEBRERO

FarmaJournal, 2018, vol. 3, núm. 2, pp. 63-73

RESUMEN: *Introducción:* Gripe y resfriado son dos patologías de origen vírico que aumentan las consultas en farmacia comunitaria en los meses de frío. Forma parte de la labor asistencial del farmacéutico un adecuado abordaje de esta sintomatología menor y se debe de realizar de manera consensuada a fin de que se tengan en cuenta todos los aspectos de dichas patologías, que poseen inmunidad limitada y numerosas reinfecciones.

Objetivos: Ofrecer una adecuada atención farmacéutica protocolizando la actuación en la oficina de farmacia. Ofrecer al paciente la máxima información sobre la enfermedad con el fin de conseguir una adecuada atención sanitaria.

Materiales y métodos: Estudio observacional, trasversal, realizado en la oficina de farmacia de Tomas Codesal, en Zamora capital. Se realizaron evaluaciones mediante encuestas acompañada de un díptico informativo que se entrega al paciente.

Resultados y discusión: Los datos obtenidos muestran que la mayoría de los pacientes acuden en primer lugar a la farmacia comunitaria ante la aparición de los primeros síntomas de gripe o resfriado.

Conclusión: Desde la Farmacia Comunitaria se hace una labor asistencial muy importante, mejorando la calidad de vida del paciente, la prevención de enfermedades y su conocimiento en la distinción de dos patologías muy consultadas al farmacéutico.

Palabras clave: Catarro; Gripe; Rinovirus; Vacunación.

OLLEROS ANAYA, ANA M.; MARTÍN MARTÍN, CRISANTO

COMUNIDADES MICROBIANAS QUE VIVEN EN SIMBIOSIS CON EL SER HUMANO. BENEFICIOS EN TERAPÉUTICA DE PATOLOGÍAS MENORES. PRÁCTICAS TUTELADAS, FEBRERO-JULIO 2017
FarmaJournal, 2018, vol. 3, núm. 2, pp. 75-82

RESUMEN: *Introducción:* La base de la terapia probiótica es la administración de microorganismos vivos a la microbiota del paciente con el fin de repararla o reforzarla en situaciones de riesgo.

Objetivos: Estudiar y mejorar el conocimiento del paciente sobre terapia probiótica. Contrastar los beneficios de la combinación de esta terapia junto a otros tratamientos en diferentes patologías.

Materiales y método: Estudio de 32 casos en los que el paciente presenta prescripción de un probiótico o se procede a su indicación desde la oficina de farmacia desde febrero a julio de 2017.

Los datos se obtienen de dos entrevistas y se analizaron mediante el programa informáticos Office-Excel.

Resultados: En el 25% de los casos estudiados los probióticos son prescritos. La mayoría de ellos recibe la información necesaria por parte del prescriptor. El resto desconoce la

terapia. La dispensación es mayor para los casos de tratamiento de patologías establecidas que en profilaxis.

Los pacientes están satisfechos con la eficacia del tratamiento. La adherencia al tratamiento resultó exitosa. Queda demostrada la seguridad de los probióticos. Los pacientes calificaron la información recibida como beneficiosa y repetirían en caso de encontrarse en una situación similar.

Conclusiones: Los pacientes no conocen los beneficios de la terapia probiótica. Las prescripciones por parte de los facultativos son escasas. Los resultados indican que desde la oficina de farmacia puede realizarse una labor asistencial importante en cuanto al tratamiento de patologías menores con probióticos.

Palabras clave: Probióticos; prebióticos; simbióticos.

PÉREZ MACHADO, NATALIA; SIMÓN MARTÍN, FERNANDO; RONCERO RIESCO, MÓNICA
RELACIÓN ROSÁCEA Y *DEMODEX FOLLICULORUM*
FarmaJournal, 2018, vol. 3, núm. 2, pp. 83-91

RESUMEN: La rosácea constituye una condición inflamatoria y crónica de la piel en adultos. Afecta principalmente al centro de la cara. La prevalencia de esta enfermedad varía según la zona geográfica y la raza. En general aumenta con la edad y afecta más a las mujeres. Normalmente el diagnóstico es clínico y no se practican biopsias. Según algunos estudios existe una relación entre el desarrollo de la enfermedad y el aumento del número de *Demodex folliculorum* en la piel del paciente. Este ácaro se encuentra habitualmente en la piel de los humanos de manera asintomática. Sin embargo, un aumento de su población unido a factores predisponentes pueden desencadenar problemas.

Para determinar la presencia de ácaros se recurre a técnicas como el punch o el raspado y para cuantificar la densidad de *Demodex* se observa el tejido biopsiado mediante técnicas de microscopía. El objetivo del trabajo es estudiar la relación que existe entre la rosácea y la presencia de *Demodex folliculorum* en 16 muestras de biopsias realizadas a 16 pacientes con rosácea del Hospital Clínico de Salamanca. Esta relación se cree positiva ya que en más de la mitad nuestras muestras existe *Demodex*, sin olvidar que diversos estudios avalan esta relación.

Palabras clave: rosácea; *Demodex folliculorum*; biopsia; piel.

SUÁREZ CHAMIZO, ROSA MARÍA; PÉREZ HIGUERO, FRANCISCO LUIS; ÁLVAREZ LOZANO, RAQUEL
EFECTIVIDAD DE LA ATENCIÓN FARMACÉUTICA EN PACIENTES HIPERTENSOS EN UNA OFICINA DE FARMACIA DE VILLANUEVA DE LA SERENA (BADAJOZ)
FarmaJournal, 2018, vol. 3, núm. 2, pp. 93-104

RESUMEN: El objetivo principal de este estudio experimental es evaluar la efectividad de la Atención Farmacéutica en pacientes reales hipertensos. Los materiales y métodos

empleados fueron una muestra de 30 pacientes hipertensos asistidos en un Servicio de Farmacia Comunitaria en Villanueva de La Serena, Badajoz. El grupo de pacientes recibió seguimiento durante un periodo de 6 meses, de febrero a julio de 2017. Respecto a los resultados, se observó que tras la intervención de la Atención Farmacéutica mejoraron de forma significativa las cifras de presión arterial, se detectaron y resolvieron problemas relacionados con la medicación, e incrementaron el cumplimiento de los tratamientos y medidas higiénico-dietéticas junto con el grado de satisfacción y confianza de los pacientes. La Atención Farmacéutica es el futuro de la Farmacia Asistencial, con esta investigación se pretende aportar datos clínicos para consensuar un documento oficial que sirva para trasladar a otros profesionales la eficacia de esta actividad, aunque serán necesarios más estudios prospectivos que cuantifiquen la utilidad de la Atención Farmacéutica de forma protocolizada, así como actualizar el único documento de consenso publicado por el Ministerio de Sanidad y Consumo en 2002.

Palabras clave: Atención Farmacéutica; Hipertensión; Farmacia comunitaria; Problemas relacionados con la medicación; Cumplimiento; Medidas higiénico-dietéticas.

CODESAL FIDALGO, MARINA; MARTÍN SUÁREZ, ANA MARÍA; CODESAL GERVÁS, TOMÁS
INTERVENCIÓN FARMACÉUTICA ANTE LA DEMANDA Y DISPENSACIÓN DE ANTIBIÓTICOS EN
UNA FARMACIA COMUNITARIA
FarmaJournal, 2018, vol. 3, núm. 2, pp. 105-114

RESUMEN: Los Farmacéuticos Comunitarios deben cooperar garantizando el uso adecuado de antibióticos y así evitar la aparición de resistencias antimicrobianas, que suponen un grave problema sanitario.

Se plantea estudiar la intervención farmacéutica ante la demanda de antibióticos para administración oral mediante receta médica privada, prescripción irregular y automedicación, a través de un estudio observacional adoptando la metodología de SEFAC.

Se incluyeron 132 usuarios. El 80% presentaron receta privada y 35% no cumplían la normativa vigente. No se dispensaron automedicaciones (17%), ni 5 prescripciones irregulares, derivándose al médico el 77% de ellas. En trastornos menores, se aconsejaron medidas higiénico-dietéticas o medicamentos sin receta. Las principales indicaciones fueron infecciones odontógenas, respiratorias y urinarias. Los antibióticos más demandados fueron betalactámicos. Aunque tres de cada cuatro pacientes conocían la indicación, pauta y duración del tratamiento, solo uno de cada diez los efectos adversos, contraindicaciones o interacciones. Se detectaron PRM en 30% de los casos y en un 25% se detectó riesgo de aparición de RNM.

Con una actuación protocolizada, se ha conseguido proporcionar educación sanitaria e información sobre la utilización del antibiótico, evitar su uso innecesario, derivar al médico cuando era conveniente y mejorar la seguridad y efectividad de los tratamientos.

Palabras clave: antibióticos; resistencia; dispensación; intervención farmacéutica.

ANALYTIC SUMMARY

GARCÍA SANTOS, PAULA

ARCHITECTURAL DAMAGES OF THE FACULTY OF PHARMACY OF SALAMANCA UNIVERSITY
FarmaJournal, 2018, vol. 3, núm. 2, pp. 21-41

ABSTRACT: The building of the Faculty of Pharmacy was designed by Julio Cano Lasso and Ignacio Mendaro and it is considered a remarkable work within the Spanish rationalist architecture; however, the last few years its worsening has been revealed for all those who perform daily activities within its walls.

The aim of this work is the analysis, classification and evaluation of the observed pathologies origin, being conscious of its severity and preventing the occurrence of future injuries. The pathologies were identified *in situ* by data observation and collection and its rear organisation according to the premises on rehabilitation issues (type, orientation, level of exposure ...) established by the *Colegio de Arquitectos de Madrid*.

According to the obtained results, it can be concluding that that the most relevant pathologies are located on the facades with greater exposure to sunlight (south-east), growing vertically and/or having been caused by direct causes, among which humidity could be highlighted. Although most of the pathologies do not compromise the safety of individuals, it does cause problems of healthiness and comfort, which can hinder the normal development of the activities for which the building was conceived.

Key words: Faculty of Pharmacy; architecture; structural damages; technical study; restoration.

AVÍS, SANDRA; PÉREZ HIGUERO, FRANCISCO LUIS; VICENTE, ROSA M.^a

EVALUATION OF THE EFFECTIVENESS OF PHARMACEUTICAL CARE IN PATIENTS TREATED WITH MAGISTRAL FORMULATIONS FROM SEPTEMBER 2017 TO FEBRUARY 2018 IN THE MAGISTRAL PHARMACY OF VILLANUEVA DE LA SERENA (BADAJOZ)
FarmaJournal, 2018, vol. 3, núm. 2, pp. 43-52

ABSTRACT: The Magistral Formulations (MF) make possible the personalization of the treatments which are adapted to the particularities of each patient. In spite of this, the MF

dispensations represent a very small percentage in compare with the rest of dispensations.

The relationship between MF and Pharmaceutical Care (PC) is a field that has not been fully explored. In fact, there is no study with patients in the reviewed literature in spite of the own individualization of the pharmacotherapy itself implies the need to carry out a particular attention and final aim is to optimize the therapeutic results of the patient, increasing the efficiency, safety and adherence of the treatments.

When prescribing an MF, the pharmacist must verify that it is necessary, effective and safe for each patient in particular. If something is not correct, the pharmacist will act in the same way as using other medication and doing the pharmacoterapeutical monitoring (SFT) of the patient, performing, therefore, PC.

The objectives of this study are to carry out a retrospective observational study of MF in the pharmacy offices of the province of Badajoz as well as to evaluate the effectiveness of PC in patients treated with MF.

Key words: Magistral Formulations; Pharmaceutical Care; Pharmacoterapeutical monitoring.

DÍAZ SÁNCHEZ, SALOMÉ; MARTÍNEZ LANAO, JOSÉ; COLINO GANDARILLAS, CLARA ISABEL
INCORPORATION OF ANTI-INFECTIOUS AGENTS ON METALLIC NANOPARTICLES OF GOLD
AND CHITOSAN

FarmaJournal, 2018, vol. 3, núm. 2, pp. 53-61

ABSTRACT: Resistance to antimicrobial agents is a serious health problem, causing great mortality in the population. This makes very interesting the search for alternatives for the treatment of these infections caused by multiresistant bacteria. One of them could be the use of gold metallic nanoparticles (NPs) together with an anti-infectious agent such as ciprofloxacin which is a broad-spectrum antibacterial drug. The objective of the study was to evaluate the behavior of gold-chitosan (Au-chitosan) NPs compared to gold-citrate (Au-citrate) NPs in the uptake of ciprofloxacin for different incubation conditions. The nanoparticles were synthesized and the anti-infectious agent incorporated at different study concentrations. By ultra-high performance liquid chromatography (UHPLC), the concentrations of ciprofloxacin incorporated into the nanoparticles were estimated. The percentage incorporation of ciprofloxacin was higher for Au-citrate nanoparticles compared to Au-chitosan nanoparticles. However, Au-citrate disadvantage form large aggregates, difficulting its good management. Au-chitosan NPs are more stable and chitosan has antibacterial activities. Thus, gold and chitosan nanoparticles could be a good vehicle for the incorporation of anti-infective agents and may even have the potential to enhance their antimicrobial activity.

Key words: nanoparticles; ciprofloxacin; chitosan.

FERNÁNDEZ RODRÍGUEZ, EVA; CODESAL GERVÁS, TOMÁS
PHARMACEUTICAL CARE IN FLU AND COLD IN A COMMUNITY PHARMACY OF ZAMORA
CAPITAL IN THE MONTHS OF SEPTEMBER TO FEBRUARY
FarmaJournal, 2018, vol. 3, núm. 2, pp. 63-73

ABSTRACT: *Introduction:* Influenza and cold are two pathologies of viral origin that increase the consultations in community pharmacy in the cold months. The appropriate approach to this minor symptomatology is part of the tasks of the pharmacist and must be carried out in a consensual manner in order to take into account all aspects of these pathologies, which have limited immunity and numerous reinfections.

Objectives: Offer adequate pharmaceutical care by protocolizing the action in the pharmacy office. Offer the patient the maximum information about the disease in order to get adequate health care. Antibiotics not useful in these pathologies.

Materials and methods: Observational cross-sectional study, carried out in the pharmacy office of Tomas Codesal in Zamora, Spain. Evaluations were conducted by means of surveys accompanied by an informative brochure that is given to the patient.

Results and discussion: The data obtained show that the majority of patients come first to the community pharmacy before the appearance of the first symptoms of flu or cold.

Conclusion: From the Community Pharmacy a very important assistance work is done, improving the quality of life of the patient, the prevention of diseases and his knowledge in the distinction of two pathologies very consulted to the pharmacist.

Key words: Cold; Influenza; Rhinovirus; Vaccination.

OLLEROS ANAYA, ANA M.; MARTÍN MARTÍN, CRISANTO
MICROBIAL COMMUNITIES IN SIMBIOSIS WITH THE HUMAN BEING. BENEFITS IN THERAPEUTICS OF MINOR PATHOLOGIES. BÉJAR. SUPERVISED PRACTICES FEBRUARY - JULY 2017
FarmaJournal, 2018, vol. 3, núm. 2, pp. 75-82

ABSTRACT: *Introduction:* The basis of probiotic therapy is the administration of live microorganisms to the patient's microbiota in order to repair or reinforce it in risk situations.

Objectives: To study and improve the patient's knowledge about probiotic therapy. To contrast the benefits of combining this therapy with other treatments to treat different pathologies.

Materials and method: Study of 32 cases in which the patient presents a prescription for a probiotic or it is prescribed from the pharmacy office from February to July 2017. The data is obtained from two interviews and analysed with the Office-Excel computer program.

Results: In 25% of the cases studied, probiotics are prescribed. Most of the patients receive the necessary information from the prescriber. The rest is unaware of the therapy. The number of prescriptions is greater for treatments of established pathologies than in prophylaxis. The patients are satisfied with the effectiveness of the treatment. The adhesion to the treatment was successful. The safety of probiotics is proven. The patients

rated the information received as beneficial and would repeat it in case of being in a similar situation.

Conclusions: Patients do not know the benefits of probiotic therapy. Prescriptions by physicians are scarce. The results indicate that important assistance work can be carried out by the pharmacy office regarding the treatment of minor pathologies with probiotics.

Key words: Probiotics; prebiotics; symbiotics.

PÉREZ MACHADO, NATALIA; SIMÓN MARTÍN, FERNANDO; RONCERO RIESCO, MÓNICA
RELATION OF ROSACEA AND *DEMEX FOLLICULORUM*
FarmaJournal, 2018, vol. 3, núm. 2, pp. 83-91

ABSTRACT: Rosacea is an inflammatory and chronic condition which affects adult skin, mainly in the center of the face. The prevalence of this disease varies according to the geographic area and race. Generally rises on elders and women. Usually the diagnostic is clinic and biopsy is not required. According to several studies exists a relation between the disease and a higher growth of *Demodex folliculorum*. This mite is usually found in human skin without symptoms. However higher growths plus predisponent factors could trigger problems. For determinating mite's presence technique as punch and shave biopsy are used. For quantifying mite's number the tissue is observed by microscopy techniques. The aim of this project is to study the relation between rosacea and *Demodex folliculorum* presence in 16 biopsies from 16 patients with rosacea from Hospital Clínico of Salamanca. This relation is believed positive because in more of the half of the biopsies exists Demodex, moreover several studies support the statement.

Key words: rosácea; *Demodex folliculorum*; relation; skin biopsy.

SUÁREZ CHAMIZO, ROSA MARÍA; PÉREZ HIGUERO, FRANCISCO LUIS; ÁLVAREZ LOZANO, RAQUEL
EFFECTIVENESS OF PHARMACEUTICAL CARE IN HYPERTENSIVE PATIENTS OF HA PHARMACY
OFFICE IN VILLANUEVA DE LA SERENA (BADAJOZ)
FarmaJournal, 2018, vol. 3, núm. 2, pp. 93-104

ABSTRACT: The main objective of this experimental study is to evaluate the effectiveness of Pharmaceutical Care in real hypertensive patients. The materials and methods used were a sample of 30 hypertensive patients assisted in a Community Pharmacy Service in Villanueva de La Serena, Badajoz. The group of patients received follow-up for a period of 6 months, from February to July 2017. Regarding the results, it was observed that after the intervention of the Pharmaceutical Care, the blood pressure figures were significantly improved, problems were detected and resolved related to medication, and increased compliance with treatments and hygienic-dietary measures together with the degree of satisfaction and trust of patients. The Pharmaceutical Care is the future of the

Healthcare Pharmacy, with this research it is intended to provide clinical data to agree on an official document that serves to transfer to other professionals the effectiveness of this activity, although more prospective studies will be necessary to quantify the usefulness of the Attention Pharmaceutical in a protocolized manner, as well as updating the only consensus document published by the Ministry of Health and Consumers in 2002.

Key words: Pharmaceutical Care; Hypertension; Community Pharmacy; Drug-related problems; Compliance; Hygienic-dietary measures

CODESAL FIDALGO, MARINA; MARTÍN SUÁREZ, ANA MARÍA; CODESAL GERVÁS, TOMÁS
 PHARMACEUTICAL INTERVENTION IN THE FACE OF THE DEMAND AND DISPENSATION OF
 ANTIBIOTICS IN A COMMUNITY PHARMACY
 FarmaJournal, 2018, vol. 3, núm. 2, pp. 105-114

ABSTRACT: The Community Pharmacists must cooperate guaranteeing the adequate use of antibiotics and in this way avoid the emergence of antimicrobial resistance, which poses a serious sanitary problem.

The pharmaceutical intervention in response to the demand for antibiotics for oral administration is studied through private medical prescription, irregular prescription and self-medication, by means of an observational study adopting the SEFAC methodology.

132 users were included. 80% presented a private prescription and 35% did not comply with current regulations. Self-medication was not dispensed (17%), nor 5 irregular prescriptions, 77% of them being referred to the doctor. In minor disorders, hygienic-dietetic measures or over-the-counter medications were suggested. The main indications were odontogenic, respiratory and urinary infections. The most demanded antibiotics were betalactamics. Although three out of four patients knew the indication, regimen and duration of treatment, only one in ten adverse effects, contraindications or interactions. PRM was detected in 30% of the cases and in 25% risk of occurrence of RNM was detected.

With a protocolized action, it has been possible to supply health education and information in the use of the antibiotic, avoid unnecessary use, refer the doctor when it was convenient and improve the safety and effectiveness of the treatments.

Key words: antibiotics; resistance; dispensation; pharmaceutical intervention.

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MANAGING PROJECTS IN THE HEALTH WORLD

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One of the biggest challenges facing businesses in the current economic environment is the ever-increasing rate of change. This is driven by globalisation, rationalisation and the disruptive use of technology. Most businesses are struggling to deal with the rate of change that greatly exceeds the levels to which their executive management handled in their formative days, but which the Millennial generation are familiar with (Figure 1). In the 1980s, it might be expected that major changes only occurred every 2 or 3 years (black line); by the 2000s, as much time would be spend changing as in a steady state (blue line) but currently, successful organisations need to be in continuous change (orange line).

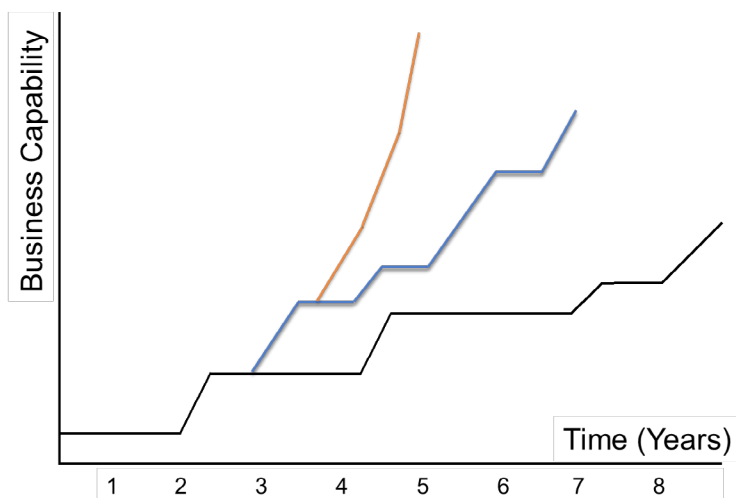


FIGURE 1. Increasing rate of business change.

In the field of health, there has been a major drive towards bio-derived materials, both for sustainability and effectiveness reasons. In delivering change, a critical distinction is between «efficiency» and «effectiveness». These terms are so closely linked that in the Scandinavian languages they are the same word, but there is a vital difference between them – effectiveness relates performance to the achievement of goals, and efficiency relates performance to the use of resources. In delivering change, there is no point in being efficient if the change is not effective i.e. the goals must be achieved to deliver any benefits.

Bio-derived products offer the potential to be more effective in healthcare, but also, through sustainability, can support efficiencies as understanding grows of the impact on our environment of using oil-based materials.

In the UK in particular, there has been a tradition of responding to economic pressures by improving financial efficiency – typically by cutting costs. However, any cost represents a mixture of capability and waste. Whilst it is beneficial to cut waste, there are consequences to cutting capability, as effective change requires capability. Cost-cutting often reduces change capability, leaving the organisation to fail in its change efforts, or forced to buy in expensive consultants, which is not efficient when change is continuous. Successful organisations are characterised by improving their effectiveness through investment, and there are many cases where companies, receiving the investment they needed, have seen their performance rise substantially.

How should an organisation aim to deliver more change, more economically? Experience suggests the need to focus on effectiveness first, then improve the efficiency progressively. Delivering «the right changes, right» demands:

1. Effective change governance – choosing the right strategic changes to invest in
2. A deep understanding of the problem and solution implications – delivering the right solutions to deliver the chosen changes

1. GOVERNANCE OF CHANGE

Over recent years, as the discipline of project management has developed and matured, it has been split into three tiers, Portfolio, Programme and Project (Figure 2).

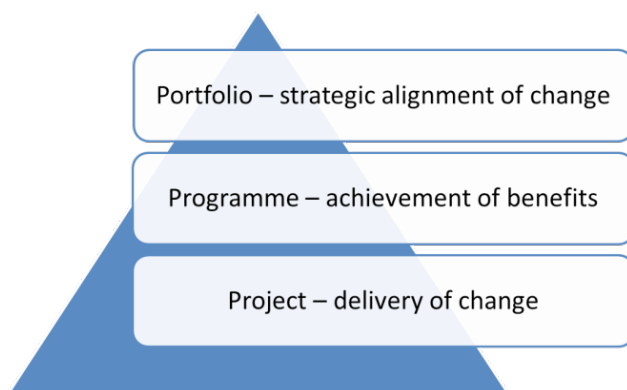


FIGURE 2. Change governance hierarchy.

Portfolio management is seen as a continuous process, funding change that implements corporate strategy (MoP, 2011). Programmes are temporary activities, managing uncertainty to deliver the capabilities, outcomes and benefits that realise corporate strategy by commissioning projects and other activities (MSP, 2011). Projects, in this model, have reduced responsibility for managing uncertainties and delivering benefits, being focused by their parent programme on delivering specific outputs that enable the programme's outcomes (APM, 2012; MSP, 2011). The following table (table 1) summarises the critical differences, and their similarities:

TABLE 1. Comparison between tiers of governance

Portfolio	Programme	Project
Strategy Winning acceptance of the need for change Prioritising change against: Strategic objectives Capacity to deliver Budget Funding change programmes (and projects) Tracking effectiveness of investment Risk management Stakeholder Engagement	Realizing the vision creating «blueprint» and «road map» Initiating and tracking projects Managing dependencies between projects Managing outcomes & realizing benefits. Transforming business-as-usual Risk management Stakeholder Engagement	Creating plan for delivery Initiating and tracking work Delivering products and capability of benefits Managing dependencies between workpackages Implementing the results Risk management Stakeholder management

2. DEFINING THE RIGHT SOLUTION

Once the right problems to address are identified, it is vital that the right solutions are chosen, reflecting a thorough understanding of the nature of each problem, its complete scope, and the implications of implementing the solution selected. Often solutions look sound until tested in use, at which time unforeseen consequences are revealed. Sadly, sometimes these consequences are directly opposite to the results aimed for.

Systems Thinking is a discipline that seeks to understand the problem comprehensively, especially the dynamic interaction between solution elements and people, to foresee all the implications and prevent unsuitable solutions being built.

The Association for Project Management (APM) has a Specific Interest Group looking into applying Systems Thinking as a guiding discipline in achieving successful change, and has been collaborating with INCOSE (UK), the Systems Engineering professional body. Together, the following model (Figure 3) shows how the professions interface in the typical V-model of change.

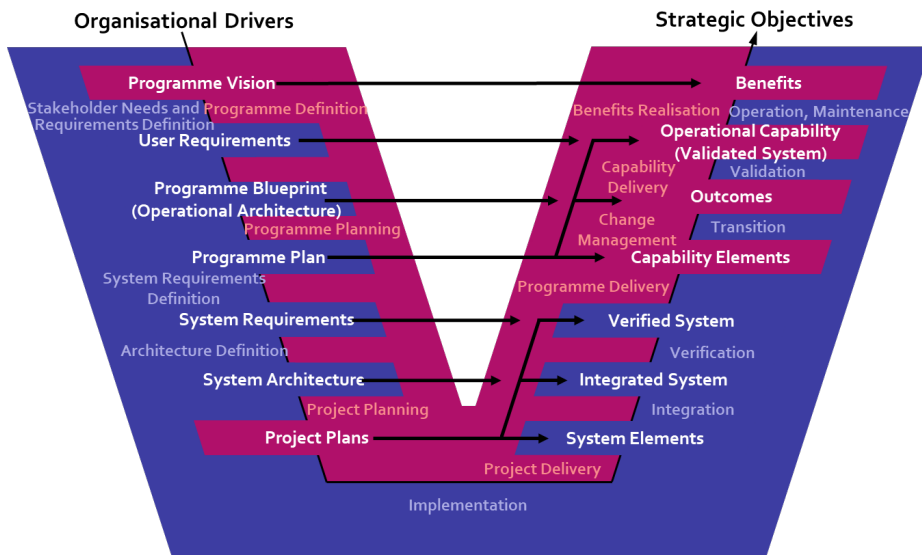


FIGURE 3. Integration of project management and systems engineering.

3. WHAT MAKES A PROJECT?

Any project, health-related or otherwise, has some basic characteristics in common:

- Has an aim or purpose
- Has a beginning
- Takes a finite length of time (and budget)
- Has an end
- Has a result

Achieving the aim in time, within budget, requires optimising efforts. At its most simplistic, this is balancing the «Iron Triangle» or «Triple Constraint» of project management (Figure 4):

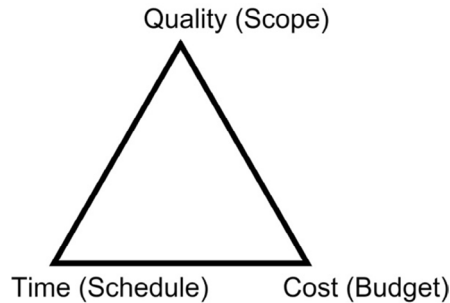


FIGURE 4. The Iron Triangle.

Starting with time; why are deadlines there? Projects exist to deliver benefits, and naturally they are wanted as soon as possible, and no later than the planned date. Where do they come from? They can be externally imposed (by Government, regulators such as the US Federal Drugs Administration (FDA), the European Union (EU) or by the organisation's management setting internal targets in meeting business objectives.

It is easy to measure time, so the temptation is to focus on timeliness as a key performance measure for projects.

Moving on to cost; where does funding come from? External sources include the European Union, national Government or customers, or internal investment by the organisation itself. All want to see that their money has been spent wisely and well.

It is easy to measure cost, so cost is another easy measure for project performance tracking, but doesn't necessarily help prove it is well-spent.

This leaves quality; but what does quality mean? There are two standard definitions:

1. Fitness for Purpose
2. Meeting requirements

These are NOT easy to measure; yet failure to get quality right will normally result in substantial delays and additional costs, even complete failure.

In classic waterfall (sequential) project methodologies, the very last activity is acceptance testing, which often reveals that the solution isn't quite fit for purpose, especially in software development. This has driven the development of formal «Agile» methodologies that use incremental development to validate the requirements step-by-step. Avoiding developing solutions to invalid requirements saves time and cost, and incremental development can allow earlier delivery of benefits (Figure 5).

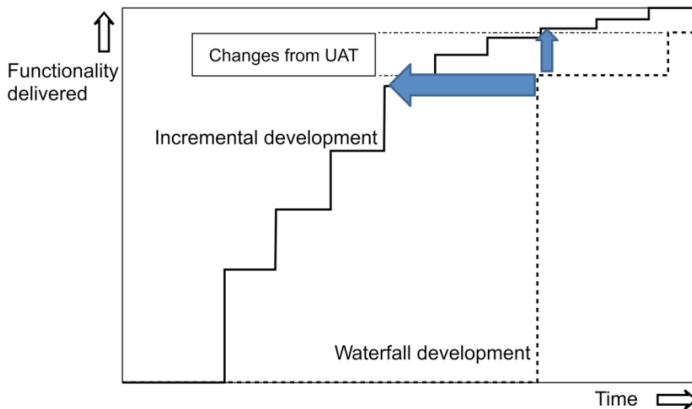


FIGURE 5. Benefits delivery by waterfall and Agile projects.

Examples of «normal» projects include constructing a new bridge, building a new railway and installing a new computer system. These have little flexibility in outcomes; the bridge must cross the river, the railway carries trains between cities, the new computer system does what it has to. Success is measured against doing what you planned; negative results are a failure.

Health projects include new drug treatments, new surgical techniques and robotic prosthetic limbs. These are often characterised by uncertainty in outcomes; Penicillin was a chance discovery from completely unrelated research, Viagra was developed for treating heart conditions, Minoxidil was developed as a blood pressure medication, but is much more popular as a treatment for hair loss. This means that in healthcare, success is often any exploitable outcome, even proving a negative result.

4. THE CHALLENGES OF MANAGING SUCCESSFUL HEALTH PROJECTS

Health projects have special requirements too; patient safety, researcher safety, regulation – restrictions on what can be done, licensing – definitions of what must be done (and costs) and ethics – what testing can be accepted.

Health companies also need to secure a fair commercial return on the vast investment needed, through managing security, intellectual property, licensing of manufacture and patents.

Clever and innovative technology to carry out healthcare research has been progressing steadily for many years, but increasing capability comes at ever-increasing cost due to the restricted market size.

5. INFORMATION TECHNOLOGY'S POTENTIAL IN HEALTH PROJECTS

The key area where capability has expanded greatly without much greater costs is in computation, where the use of information technology has allowed all sorts of industries to change fundamentally the way they operate, but there are key barriers to this.

Many IT solutions simply automate current manual processes that Charles Dickens would recognize. Disruptive solutions need IT expertise to be allowed to help drive the business, making IT a partner in success, not slave or servant. This is not common, for two primary reasons:

- The Interest Gap - Business people/scientists are typically not interested in information technology, and IT people are often not interested in business/science.
- The Language Gap - Business people/scientists don't understand IT terms and IT people don't understand business/scientific terms.

One company illustrates this well. There was a constant e-mail «War» between the IT department and the Management Accounts team. The key people never met face to face, communicating by e-mails (copied to everyone). They had no understanding of each other's challenges. After a coaching exercise, face-to-face

meetings took place, each party understood the challenges facing the other, IT solutions were designed and delivered to meet the business needs, based on a deep understanding, and peace broke out.

Looking at organisations that have really grown successfully in the last 20 years e.g. Amazon, they wanted to exploit IT in a new way to disrupt the existing business models.

6. CASE STUDY: USING IT TO TRANSFORM HEALTHCARE - THE NHS DIRECT WEBSITE

The UK's National Health Service (NHS) set out to use digital technology to transform the delivery of medical advice to patients, so reducing unnecessary visits to doctors (free under the NHS) and provide a much quicker digital age alternative.

The target solution was an on-line advisory service, including diagnostic symptom checkers powered by applied Artificial Intelligence. These would be maintained by clinical experts, supported by other content managed directly by a specialist editorial team. Given its purpose, it had to be disaster-proof (or almost so).

It was the first clinical diagnostic Expert System in large-scale public use, integrating different technologies for the first time; specialist Expert System and commercial website content management system. It faced challenging requirements; high performance – supporting thousands of concurrent users, and disaster resilience. It was subject to a range of challenges, especially changing requirements and very tight timescales. In addition, the partners had never worked together before, and had very different cultures. Some suppliers were contracted direct to the customer, not to the prime contractor, creating contractual and management overheads. The customer's Clinician team were not technically-orientated, so it was necessary to sub-contract knowledge-base development to meet the demanding timescales. The overall project team was spread widely, over 10 locations in the UK and one in New Zealand.

The project was rated a great success by the NHS, for a number of reasons; the solution was delivered in 6 months, not the 12 originally envisaged; it met functional, and exceeded performance, requirements; it was delivered within budget and enabled growth from 5 symptom checkers to 44 in just 6 months. The customer was delighted, estimating a saving over £60 million in its first year of operation, and the project attracted four awards, including a Queen's Award.

This was achieved by building a team spirit across organisational boundaries, working closely with individuals, focusing on success, not process or money. Team-working enabled renegotiation of work allocation for the best people to do each task, and the openness and honesty necessary to understand what could go wrong and prevent/plan for it.

7. CASE STUDY: FLEXIBLE APPROACH TO PROJECT MANAGEMENT - EXPLOITING SUSTAINABLE MATERIALS IN HYGIENE

For well over a century, personal hygiene has been recognised as a key factor in health.



The Exilva project is a European project funded by the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement N°709746.

Exilva is a recently-developed micro-fibrillated cellulose product, produced sustainably from wood in Borregaard's Norwegian bio-refinery. Borregaard, the lead partner in the project, is building a new production line to deliver Exilva on a commercial scale.

The project has been looking to assess the value of Exilva as a sustainable alternative to oil-derived ingredients in hygiene products.

The first personal hygiene product gave promising results, but requires expensive manufacturing process changes and capital investment, not commercially justifiable on a low profit-margin product. The team is now investigating some unusual properties that could improve the business case. The flexibility in thinking, and willingness to explore other avenues of investigation, has moved this work on well past the first, potentially show-stopping, challenges.

The second hygiene product successfully replaced oil-based ingredients with Exilva, with some useful additional characteristics, as targeted. Unlike the first product, all research went smoothly, and progress was rapid. Like the first product, it needs manufacturing process changes, hence substantial capital investment but despite the good progress, no potential savings have been identified yet, and a potential customer acceptance issue has been identified that could increase packaging costs.

Progress in both products is the result of effective team-working under strong leadership.

8. CONCLUSIONS FOR SUCCESSFUL HEALTHCARE PROJECTS

Taking all the insights together, we draw the following advice:

- Invest in building strong teams. High levels of challenge can be met through team-working across organizations and cultures
- Apply strong and active risk management. Understand where there is uncertainty and manage it actively; what if X happens? What if Y happens? What if nothing happens?
- Manage the customer's expectations actively and honestly, to build trust from stakeholders who are used to certainties; what has been achieved, what your plans are for all scenarios, how ethics/regulation/licensing are covered in each

These are very uncertain times - some will win, some will lose. Winners will see what they have to do, and do it quickly; losers will do too little, too late. Effective change needs clear analysis and strong decision-making, and requires investment. Systems thinking helps guide sound investment through understanding the whole problem, not just parts of it, and the end-to-end requirements and implications.

Investment can be managed through boosting effectiveness and efficiency with IT, using multi-skilled teams that understand what the business needs.

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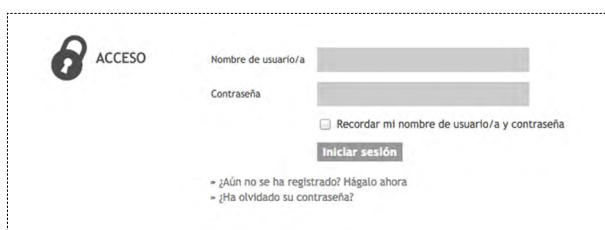
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